



Custom Parts Lists

250 HXI 700 Top Drive System

250TON HXI 700HP
Unit 530

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Revision Information

Version	Date	Description of Changes
Rev 0	September 2007	First release of document

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CHAPTER 1: ABOUT THIS DOCUMENT

This chapter contains all the parts lists and the accompanying illustrations for the 250TON HXI 700HP top drive system.

Table 1-1: Where to Find More Information

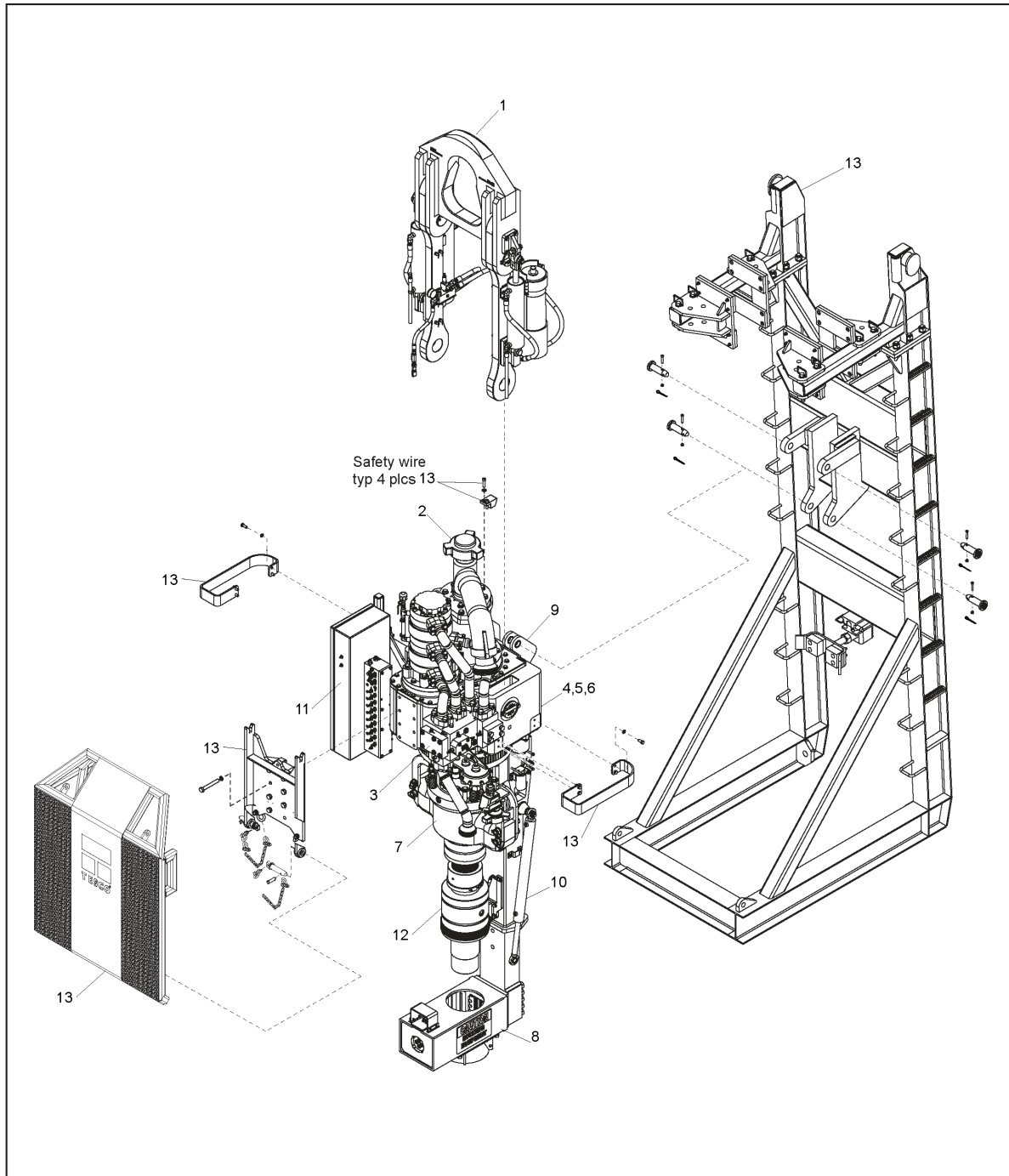
For information on	Refer to
system components overview	System Description
<ul style="list-style-type: none"> • installation • rig up • commissioning • pre-operational checklists • rig out procedures 	Installation Guide
<ul style="list-style-type: none"> • setting torque and speed • driller's panel functions and operating descriptions • making connections • drilling ahead • tripping • freeing stuck pipe 	Operations Guide
<ul style="list-style-type: none"> • load path inspections • maintenance/service schedules • component disassembly and reassembly 	Maintenance Guide
Tesco manufactured parts and part numbers	Parts List
troubleshooting	Troubleshooting Guide (where available)
<ul style="list-style-type: none"> • electrical schematics • hydraulic schematics • cooling schematics • gearbox lubrication schematics 	System schematics
available options and spares	Tesco Representative

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CHAPTER 2: TOP DRIVE PARTS LISTS

This chapter contains the parts lists and accompanying illustrations for the 250TON HXI 700HP.

TOP DRIVE, c/w SWIVEL YOKE, 250-HXI-700

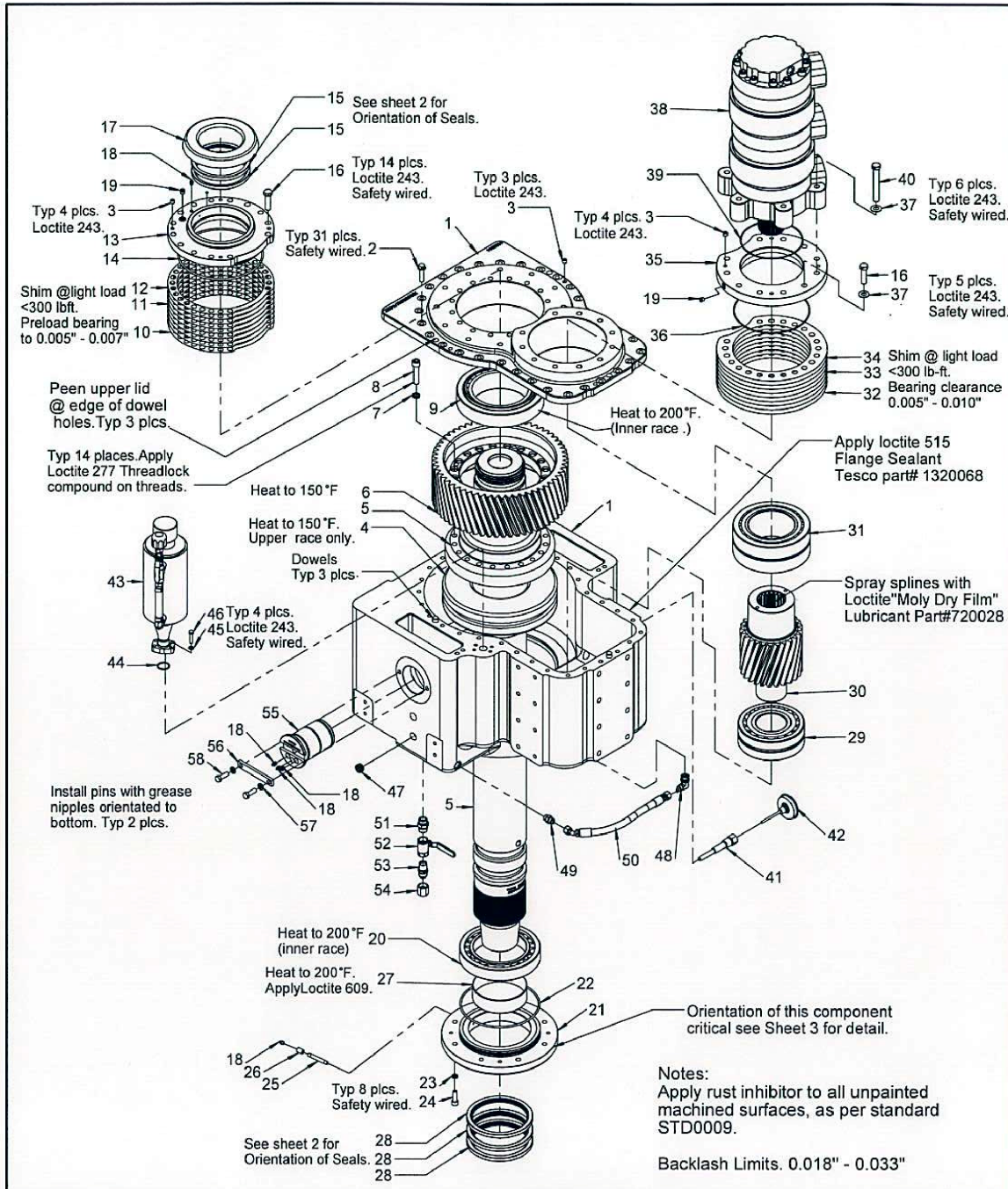


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					DRAFTED: DenisG	DATE: 08MAY2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100001		PAGE: 1 OF 2	REV 0

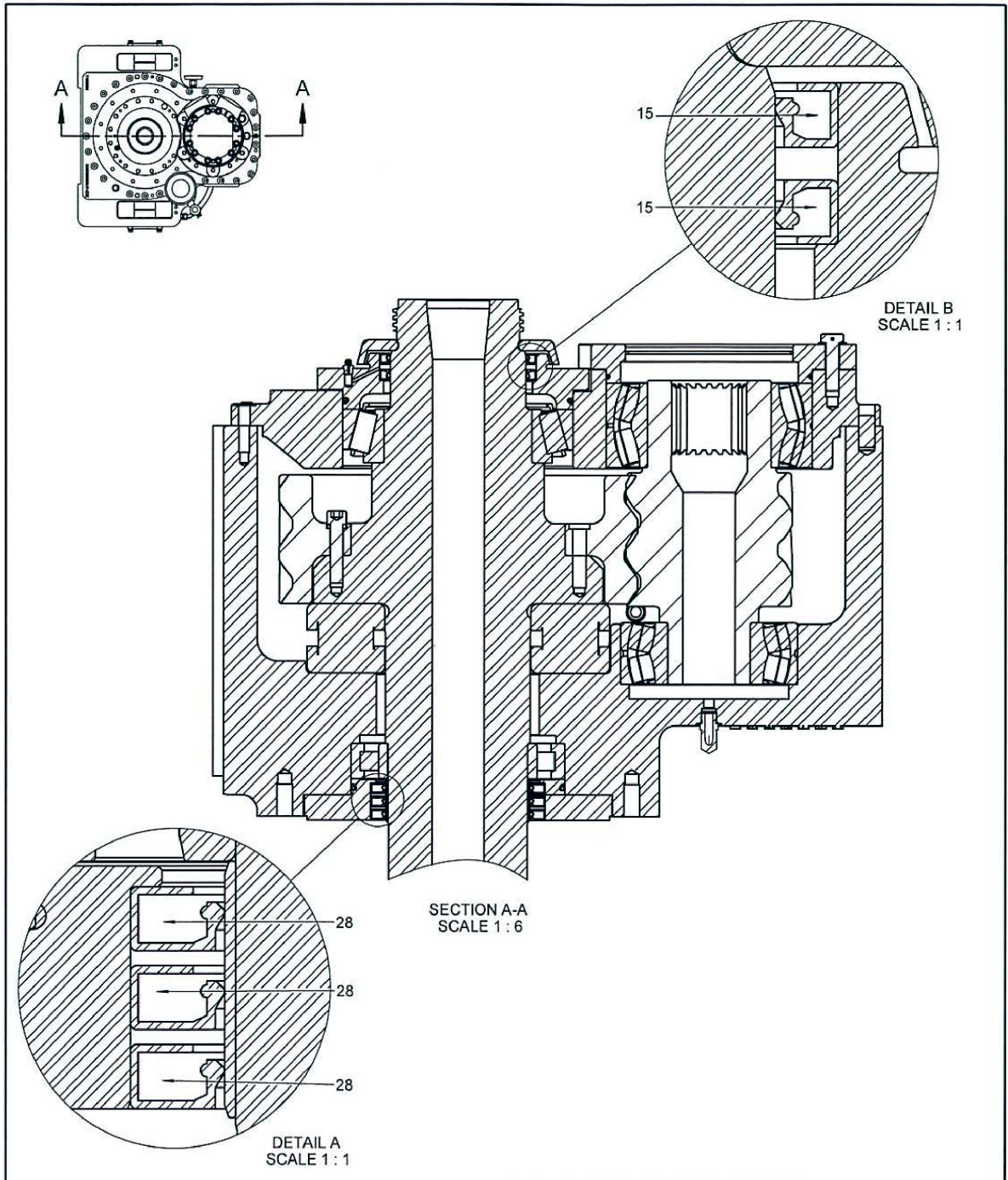
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100020	KIT, YOKE, LINK & COUNTER BALANCE, 250 HXI 700
2	1	1100021	KIT, BONNET GOOSENECK, WASHPIPE, 250 HXI 700
3	1	1100022	KIT, MOTOR MANIFOLD 250 HXI 700
4	1	1100002	GEARBOX ASSEMBLY, 250 HXI 700
5	1	1100086	KIT, PIPE HANDLER LOCK, 250 HXI 700
6	1	1100073	KIT, ROTATE, MOTOR, 250 HXI 700
7	1	1100006	KIT, PIPE HANDLER, 250 HXI 700
8	1	1100007	KIT, GRABBER LEG, 250 HXI 700
9	1	1100112	KIT, TORQUE ARREST, 250 HXI 700
10	1	1100113	KIT, LINK TILT, 250 HXI 700
11	1	1100047	KIT, AUX HYDRAULICS, 250 HXI 700
12	1	1100091	KIT, MUDDSAVER VALVE 250 HXI 700
13	1	1100023	KIT, ACCESSORIES, 250 HXI 700

					TITLE: Top Drive, c/w Swivel Yoke, 250 HXI 700	
					DRAFTED: DenisG	DATE: 30MAY2007
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 	
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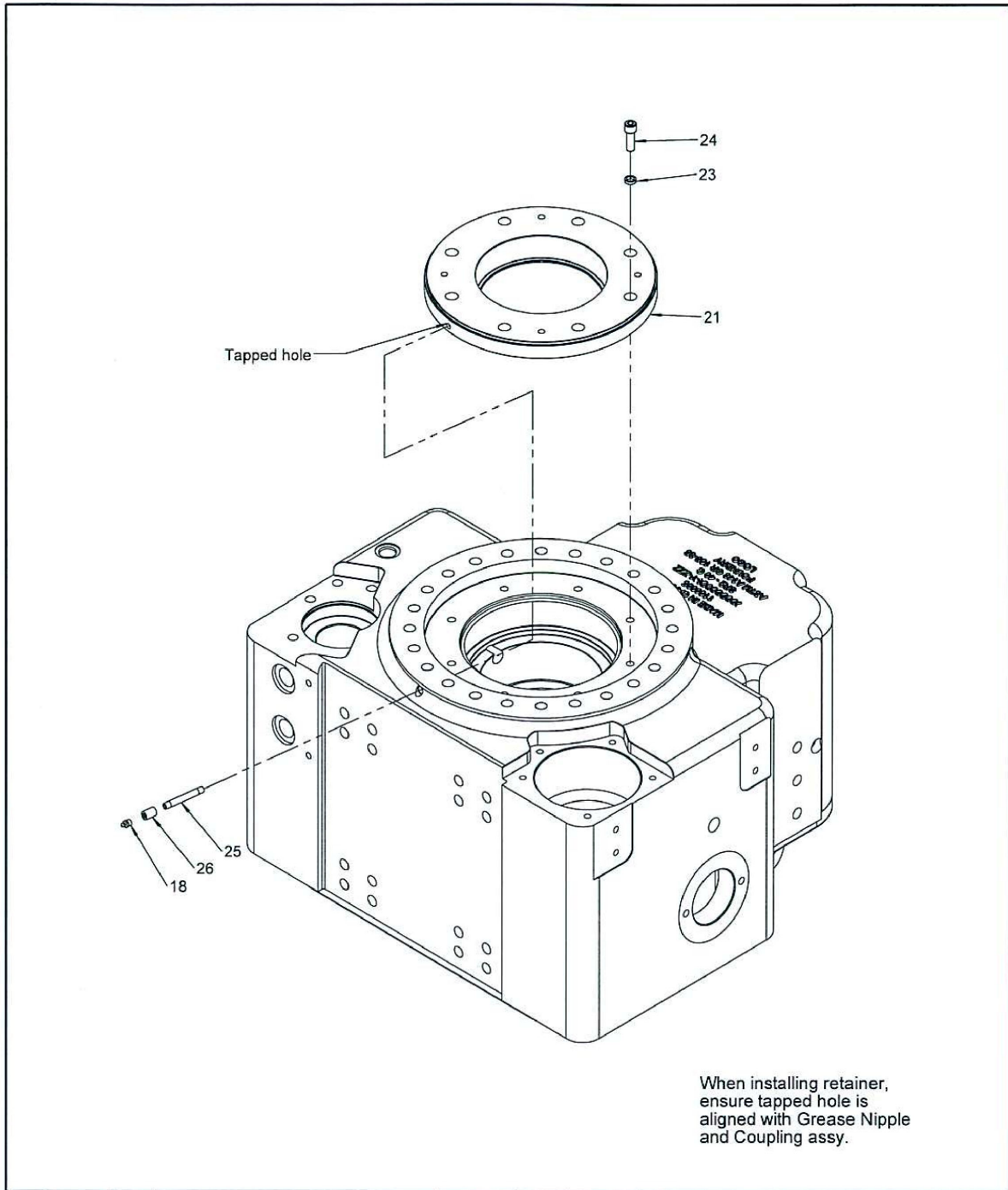
GEARBOX ASSEMBLY, 250-HXI-700



REV	ECN	BY	DESCRIPTION	DATE	TITLE: Gearbox, 2.28:1 Ratio, 250-HXI-700		
1	112-0080	VNL	Changed item 38	02AUG2007			
0	132-0005	DG	ISSUED FOR PRODUCTION	25JUN2007			
					DRAFTED: DenisG	DATE: 03NOV2006	
					CHECKED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	
					DWG NO: 1100002	PAGE: 1 OF 4	REV: 1



						TITLE: Gearbox, 2.28:1 Ratio, 250-HXI-700		
1	112-0080	VNL	Refer to sheet 1	02AUG2007		DRAFTED: DenisG	DATE: 03NOV2006	
0	132-0005	DG	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: <i>DM</i>	APPROVED: <i>D.A.</i>		
REV	ECN	BY	DESCRIPTION	DATE	DWG NO: 1100002	PAGE: 2 OF 4	REV: 1	



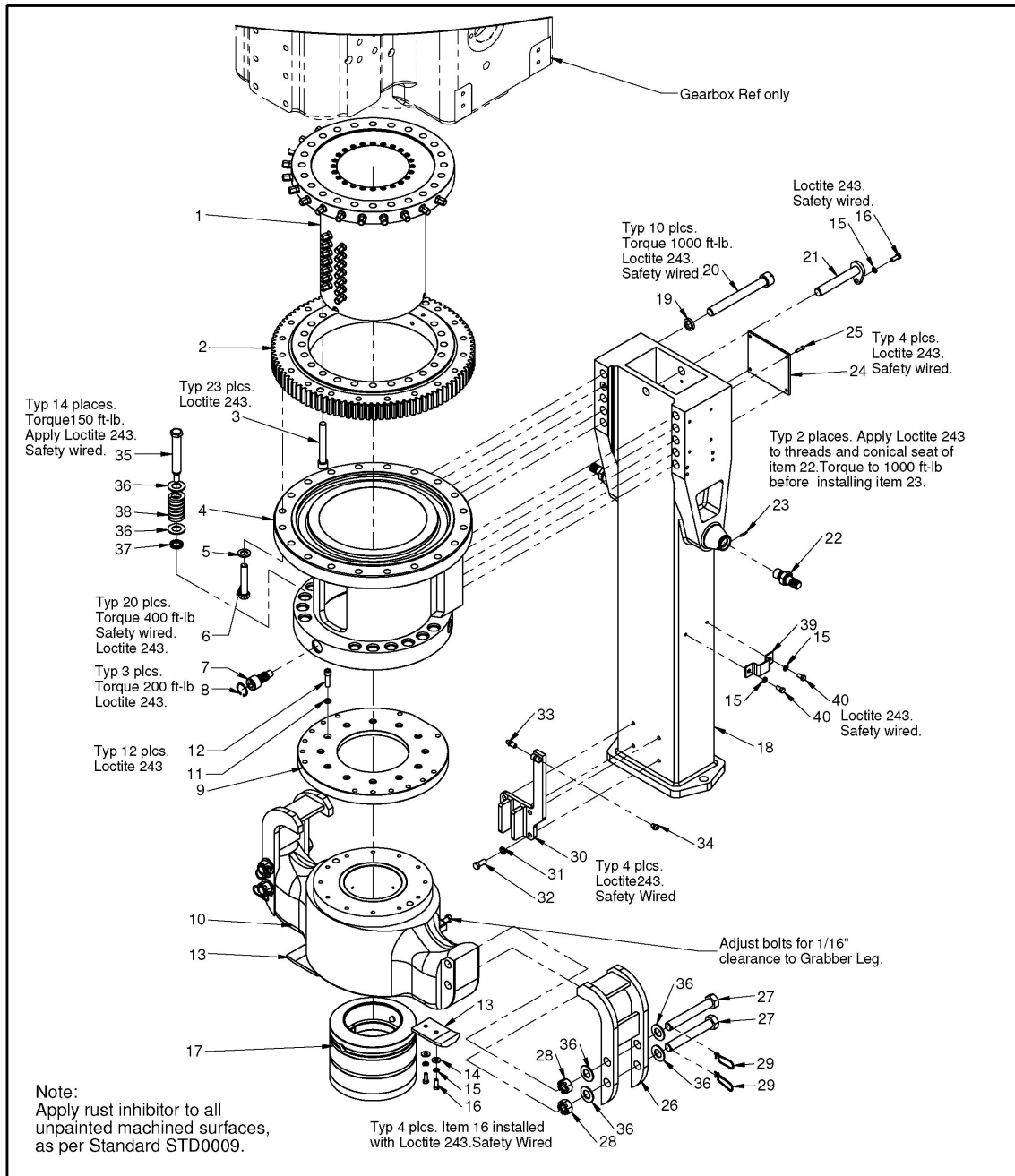
When installing retainer, ensure tapped hole is aligned with Grease Nipple and Coupling assy.




								TITLE: Gearbox,2.28:1 Ratio,250-HXI-700		
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0	132-0005	DG	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: <i>DN</i>			APPROVED: <i>Li-A</i>		
REV	ECN	BY	DESCRIPTION	DATE	DWG NO: 1100002			PAGE: 3 OF 4		REV: 1

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100003	GEARBOX MACHINING 250HXI700
2	31	1100095	SCREW, FLG-LOCK, HEX HD, 1/2"-13UNC x 2", GR8, PLD, DR HD
3	11	15520	SCREW, SET, SKT DRIVE, CUP PT, 1/2"-13UNCx0.5"LG
4	1	7452	BEARING, THRUST, RLR, TPR, 14.5"ODx7.0"IDx3.25"THK
5	1	1100008	MACHINE, QUILL, NC50 PIN, 250HXI700
6	1	1100010	GEAR, BULL, HELICAL, QUILL, 250HXI250
7	20	1064	WASHER, LOCK, HELICAL SPRING, HI-COLLAR, 5/8"
8	20	13295	SCREW, CAP, SKT HD, 5/8"-11UNCx2-3/4", ALY, UNBRAKO
9	1	1100028	BEARING, THRUST, RLR, TPR, 280ODx180IDx64THK
10	5	1100097	STEEL SHIM STOCK .010" THK
11	2	1100098	STEEL SHIM STOCK .005" THK
12	2	1100099	STEEL SHIM STOCK .002" THK
13	1	1100032	RETAINER, BEARING, UPPER QUILL 250HXI700
14	1	340167	O-RING, N70-378, 10.475"IDx0.210"DIA
15	2	0633	OIL SEAL, 6.500 SHAFT x 7.500 OD x 0.50 CRWH1, CR64994
16	19	731043	SCREW, CAP, HEX HD, 5/8"-11UNCx2-1/4", Gr8, Pld, Dr Hd
17	1	820067	MUD SHIELD, GEARBOX, T100
18	8	1112	FITTING, GREASE, STR, LONG, 1/8" MNPT
19	2	2799	FITTING, HYD, PLUG, SKT HD, #4MORB
20	1	1100029	BEARING, RLR, CYL, 260ODx170IDx42THK
21	1	1100033	RETAINER, LOWER, BEARING, QUILL, GEARBOX, 250HXI700
22	1	340106	O-RING N70-376
23	8	1079	WASHER, LOCK, HEL SPRING, HI-COLLAR, 1/2"
24	8	1044	SCREW, CAP, SKT HD, 1/2"-13UNC x 1-1/2"
25	1	11718	FITTING, PIPE, NIPPLE, SCH80, 1/8"MNPTx3"Lg
26	1	1268	FITTING, PIPE, COUPLING, FULL, 3000-PSI, 1/8"FNPT
27	1	1100034	SLEEVE, WEAR, SEAL, LOWER, QUILL, GEARBOX, 250HXI700
28	3	Default	Oil Seal 6.875 Shaft x 8.375 OD x 0.50 CRWH1 CR68745
29	1	1100030	BEARING, RLR, SPH, 215ODx100IDx73THK
30	1	1100011	PINION, INPUT HELICAL, 250HXI700
31	1	1100031	BEARING, RLR, SPH, 250ODx150IDx100THK
32	5	1100101	STEEL SHIM STOCK .010" THK
33	2	1100102	STEEL SHIM STOCK .005" THK
34	2	1100103	STEEL SHIM STOCK .002" THK
35	1	1100035	RETAINER, UPPER, BEARING, MOTOR, GEARBOX, 250HXI700
36	1	4044	O-RING, N70-272, 9.484"IDx0.139"DIA
37	11	9232	WASHER, FLAT, TYPE A, NARROW 5/8" HARDENED PLD
38	1	1120189	Motor, Hyd, 125-Series, 4-port, Code 62, 250 cu-in, Splined Shaft, Rineer
39	1	0592	O-RING, N90-265, 7.734"IDx0.139"DIA
40	6	7909	SCREW, CAP, HEX HD, 5/8"-11UNCx5", Gr8, Pld, Dr Hd
41	1	0072	THERMOWELL, 304, S/S, 1/2"FNPTx3/4"MNPT
42	1	0070	THERMOMETER, BIMETAL, 0-250, 1/2"
43	1	1100070	BOTTLE, EXPANSION, ASSEMBLY, 250HXI700
44	1	4030	O-Ring, N90-219, 1.296"IDx0.139"Dia
45	4	7135	WASHER, LOCK, HELICAL SPRING, 3/8", ALLOY, PLD
46	4	8626	SCREW, CAP, HEX HD, 3/8"-16UNCx1-1/2", GR8, PLD, DR HD
47	1	0451	PLUG, MAGNETIC, SKT DRIVE, 3/4"MNPT
48	1	0204	FITTING, HYD, 90°ELB, #8MJICx#8MORB
49	1	1502	FITTING, HYD, STR, #8MJICx#8MORB
50	1	1320115	HOSE, HYD, 100R2-AT, #8X14", FJICX45FJIC
51	1	0231	FITTING, HYD, STR, #12MORBx#12MNPT
52	1	0009	VALVE, BALL, 2-WAY, 2000-PSI, WOG, 3/4"FNPTx3/4"FNPT
53	1	0281	FITTING, HYD, STR, #12MJICx#12MNPT
54	1	0403	FITTING, HYD, CAP, #12FJIC, STL
55	2	1100039	PIN GEARBOX LINK, HXI
56	2	6200	RETAINER, PIN, SWIVEL LINK
57	4	5881	WASHER, LOCK, HEL. SPRING, 1/2"
58	4	3116CapHex0.5	SCREW, CAP, HEX HD, 1/2"-13UNC x 1-1/2" LG, DR HD

								TITLE: Gearbox, 2.28:1 Ratio, 250-HXI-700		
1	112-0080	VNL	Changed item 38	02AUG2007	DRAFTED: DenisG			DATE: 03NOV2006		
0	132-0005	DG	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: <i>DN</i>			APPROVED: <i>GA</i>		
REV	ECN	BY	DESCRIPTION	DATE	DWG NO: 1100002			PAGE: 4 OF 4		REV: 1

KIT, PIPE HANDLER, 250-HXI-700

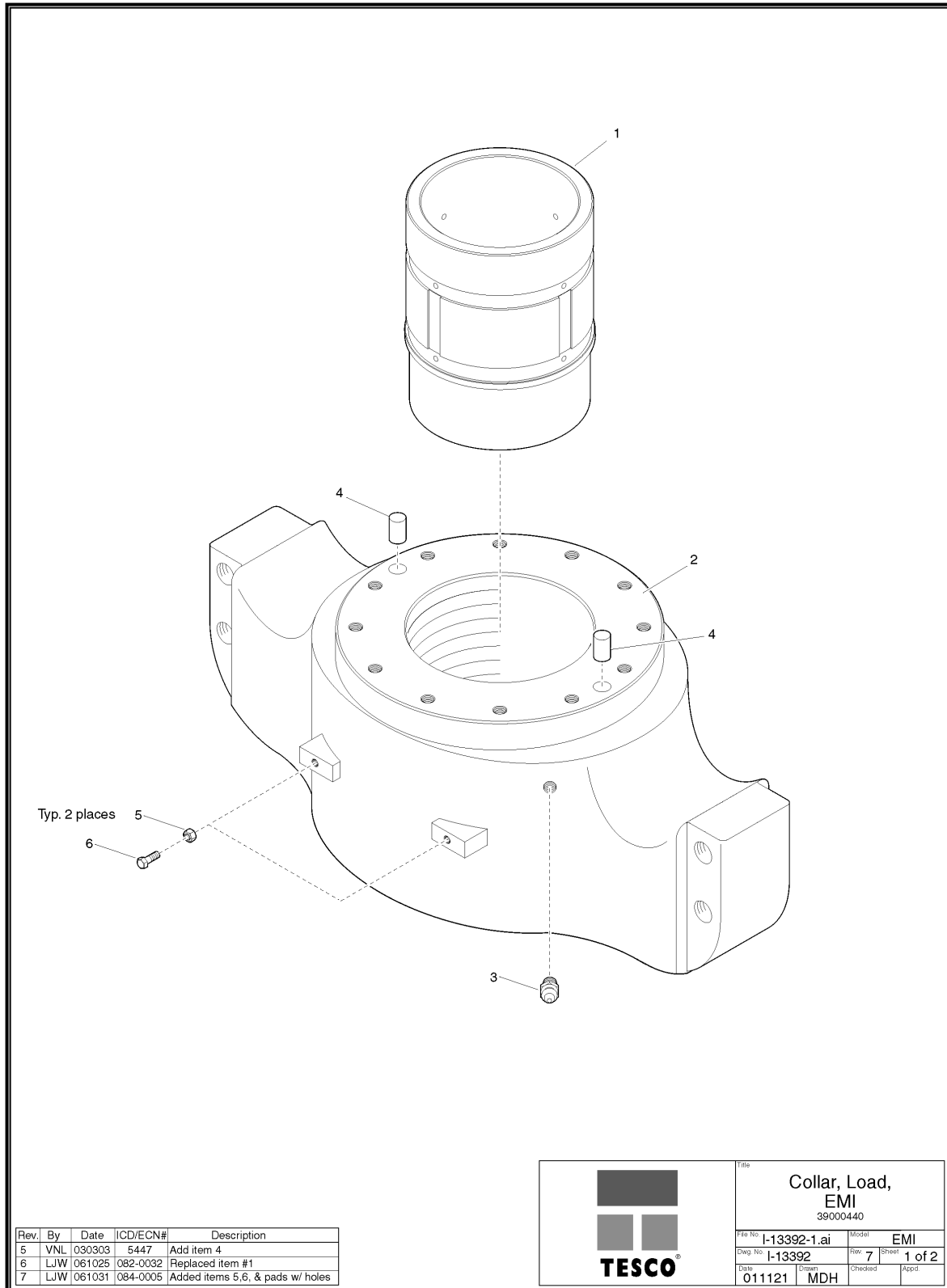


					TITLE: Kit, Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 08JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100006	PAGE: 1 OF 2	REV: 0	


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	820141	ROTARY SEAL ASSEMBLY, EX1 / HXI
2	1	840041	BEARING, SLEWING, EXT GEAR, 94T, EX1/HXI
3	23	1100106	SCREW,CAP,SKT HD,3/4"-10UNCx5-1/2"
4	1	810356	ADAPTOR, PIPE HANDLER, MACHINING
5	20	9231	WASHER, FLAT, TYPE A, NARROW, 3/4", HARDENED, PLD
6	20	3736	SCREW,CAP,HEX HD,3/4"-10UNCx4",GR8,PLD,DR HD
7	3	15516	SCREW,CAP,SKT HD,1"-8UNCx2-3/8",MOD
8	3	15517	RING,RTNG,INTERNAL,1.575"ID SHAFT,0.062"THK
9	1	810358	FLANGE, LOAD COLLAR ADAPTOR
10	1	13392	COLLAR LOAD ASSEMBLY
11	12	1079	WASHER, LOCK, HEL SPRING, HI-COLLAR, 1/2"
12	12	1042	SCREW,CAP,SKT HD,1/2"-13UNCx1-3/4"
13	2	13157	PAD, BAIL BUMPER
14	4	1083	WASHER, FLAT, WIDE, TYPE A, 0.375"
15	7	7135	WASHER,LOCK,HELICAL SPRING,3/8",ALLOY,PLD
16	5	3725	SCREW,CAP,HEX HD,3/8"-16UNCx1",GR8,PLD,DR HD
17	1	730785	LOAD NUT ASSEMBLY
18	1	1100080	LEG, UPPER GRABBER, MACHINING, 250HXI700
19	10	1059	WASHER,LOCK,HELICAL SPRING,HI-COLLAR,1",BLACK
20	10	13418	SCREW,CAP,SKT HD,1"-8UNCx9",DR HD
21	1	3437	PIN, GRABBER, LIFT
22	2	18109	STEM, BREAKAWAY MOUNT, CYLINDER
23	2	810003	PIN,SPRING,COILED,3/16"ODx1"LG
24	1	8151	NAMEPLATE, TOP DRIVE, SIX LINES
25	4	5968	SCREW, CAP, SKT HD, 1/4"-20UNC x 1", DR HD
26	2	810396	RETAINER, ELEVATOR LINK, EX1/HXI
27	4	3506	SCREW,CAP,HEX HD,1"-8UNCx7",GR8,PLD,DR THD
28	4	2348	NUT,HEX,SLOTTED,1"-8UNC,GR2
29	4	2361	PIN, SAFETY, 1/8" WIRE OD x 3-1/8" USABLE LG
30	1	820165	BRACKET, STOP, ACTUATOR, EX1/HXI
31	4	5881	WASHER,LOCK, HELICAL, SPRING,1/2",ALLOY, PLD
32	4	5966	SCREW,CAP HEX HD, 1/2"-13 UNC x 1 1/4" LG,GR8, DR HD
33	1	0285	FITTING,HYD,STR,#4MJICx#4MNPT
34	1	1115	FITTING,GREASE,STR,SHORT,1/4"MNPT
35	14	481183	BOLT,SHOULDER
36	36	14249	WASHER, FLAT, TYPE A, NARROW, 1", HARDENED, PLD
37	14	481184	SEAL,U-CUP,N4180A80,1.000"IDx1.500"OD
38	14	730752	SPRING,DIE,2.0"ODx3.5"LG,EXTRA HEAVY DUTY
39	1	810492	GUARD, HOSE, GRABBER LEG, EX1/HXI
40	2	3533	SCREW, CAP, HEX HD, 3/8" -16UNC x 3/4" DR HD

					TITLE: Kit, Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 08JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED: 	APPROVED: 	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100006	PAGE: 2 OF 2	REV: 0

COLLAR, LOAD, EMI, 250-HXI-700



Rev.	By	Date	ICD/ECN#	Description
5	VNL	030303	5447	Add item 4
6	LJW	061025	082-0032	Replaced item #1
7	LJW	061031	084-0005	Added items 5,6, & pads w/ holes

		Title	
		Collar, Load, EMI 39000440	
File No	I-13392-1.ai	Model	EMI
Dwg. No	I-13392	Rvw	7
Date	011121	Drawn	MDH
		Checked	
		Appd	
		Sheet	1 of 2

Parts List

Part #	13392
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Drawing # I-13392

Rev. 7

Refer: 1 Illustration

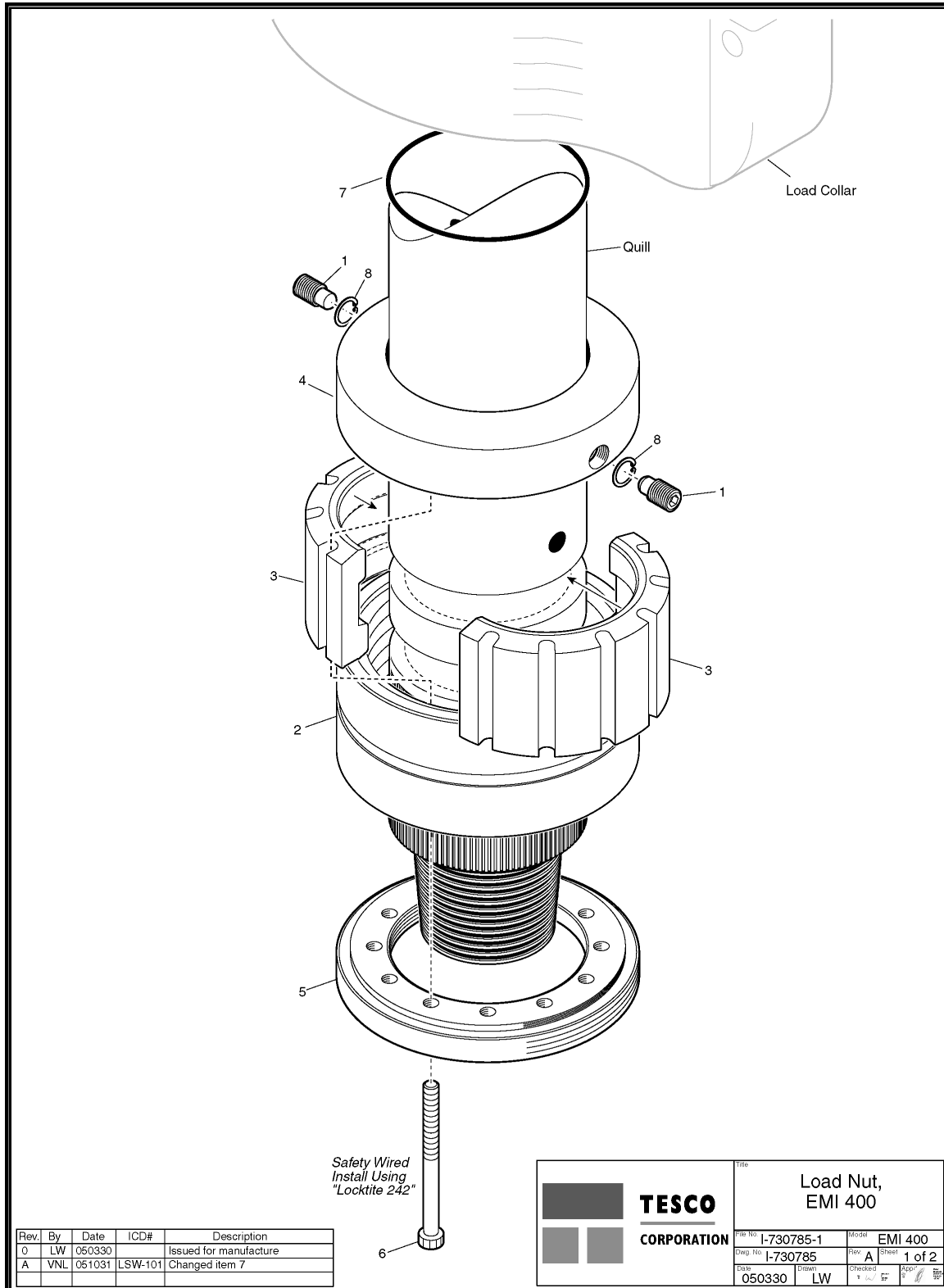
File # I-13392.xls

Page 2 of 2

Drawing Title: Collar, Load, EMI

Item #	Tesco #	Qty	Description
1	820155	1	Bushing, Load Collar, EMI/HXI
2	10328	1	COLLAR, LOAD
3	1115	1	FTG, GREASE, STRAIGHT, 1/4" NPT
4	16604	2	PIN, DOWEL, 3/4" X 2"
5	3157	2	Nut, Hex, Jam, 1/2"-13UNC, Gr2
6	0983	2	Screw, Cap, Hex Hd, 1/2"-13UNCx1-1/2", Gr8, Pld

NUT, LOAD, 250-EMI-400/250-HXI-700



Parts List

Part #	730785
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Drawing # I-730785

Rev. A

Refer: 1 Illustration

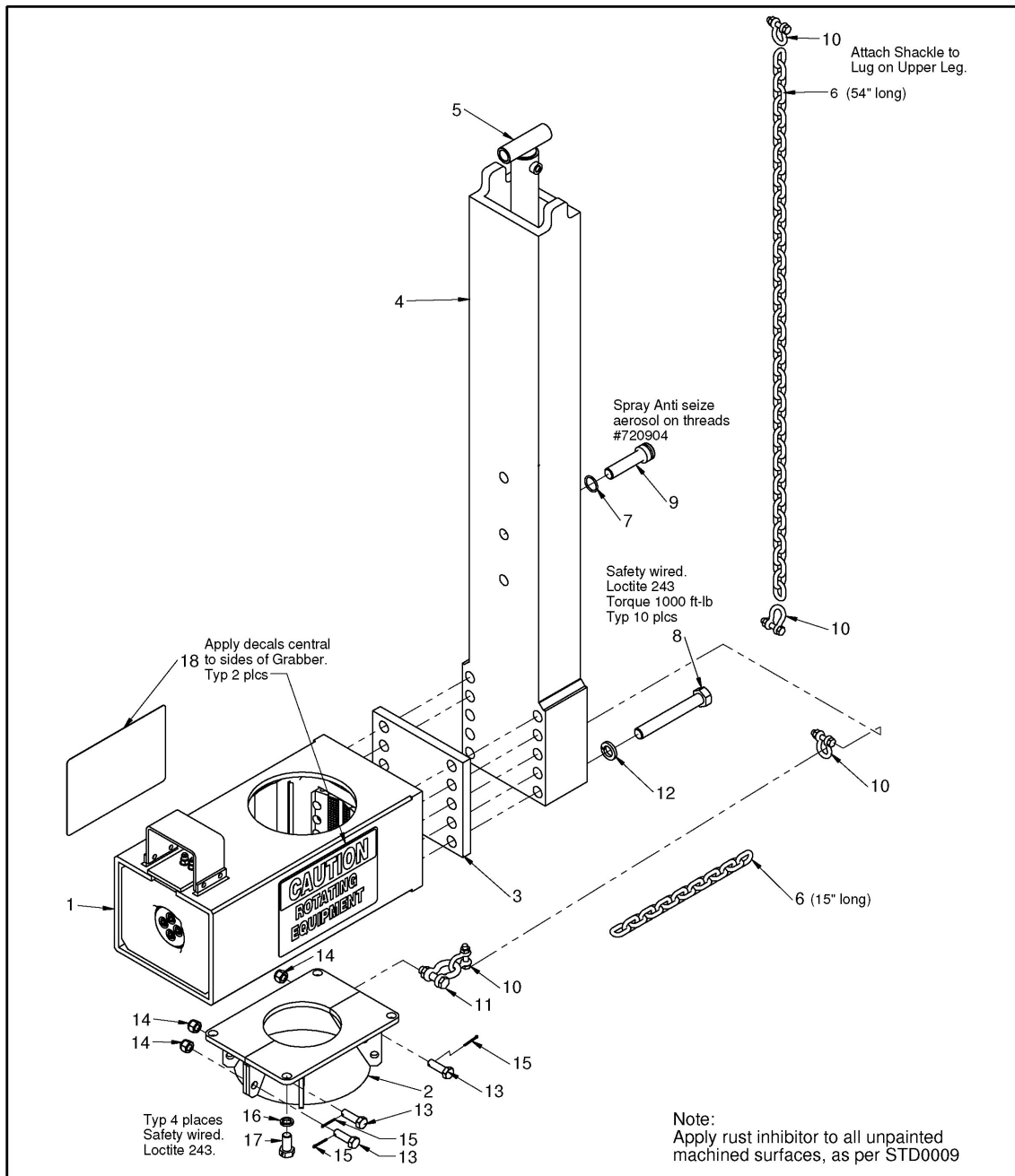
File # I-730785.xls



Page 2 of 2

Drawing Title: Nut, Load, 250-EMI-400/250-HXI-700




Item #	Tesco #	Qty	Description
1	8227	2	Screw, Set, Skt Drive, Rnd Pt, 7/8"-9UNCx1.72", Mod
2	13098	1	Sleeve, Load Nut, EMI
3	13095	1	Collar, Split, Inner, Load Nut, EMI
4	730784 Rev A	1	Retainer, Upper, Load Nut, EMI
5	13094	1	Retainer, Lower, Load Nut, EMI
6	13075	12	Screw, Cap, Skt Hd, 1/2"-13UNCx6", Dr, Hd
7	450188	1	O-Ring, N70-260, 6.484" IDx0.139" Dia
8	9755	2	Ring, Rtnng, Internal, 0.938" ID Shaft, 0.042" Thk

KIT, GRABBER LEG, 250-HXI-700

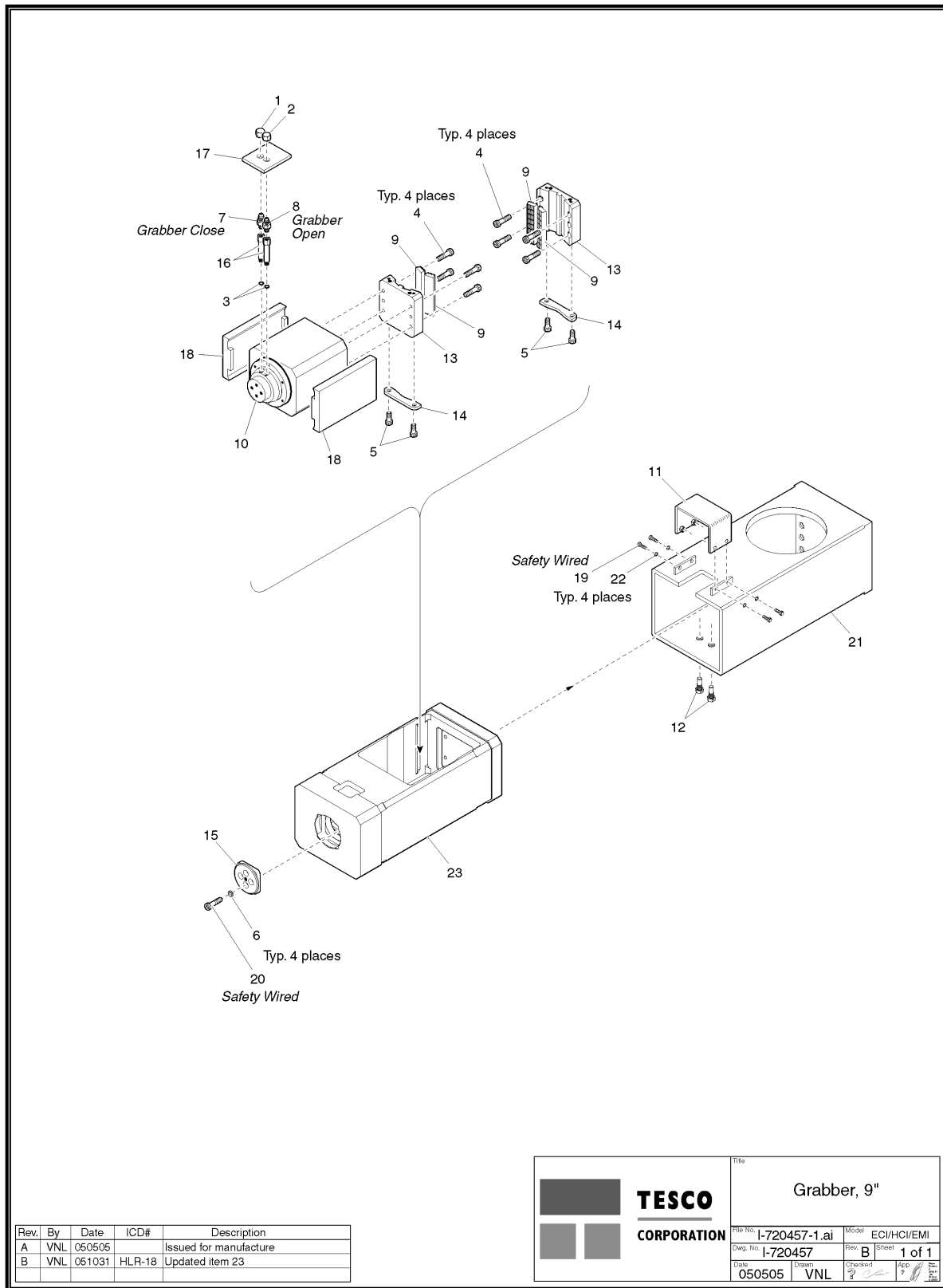


						
				TITLE: Kit, Grabber Leg 250 HXI 700		
				DRAFTED: DenisG		DATE: 20OCT2006
				CHECKED: ?		APPROVED: ?
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007			
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100007	PAGE: 1 OF 2	REV: 0

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	720457	GRABBER 9" ASSY
2	1	8987	GUIDE, SPLIT, 6-3/4 DRILL PIPE
3	1	820149	SPACER, GRABBER LEG, 15/16" THICK
4	1	3439	LEG, LOWER, GRABBER, MACHINED, EC/EMI/HC/HCI/HS
5	1	810393	CYLINDER, HYD, MODIFIED, 2" BORE x 1.25" ROD x 32" STROKE
6	1	2593	CHAIN, CLOSE-LINK, 3/8", 2500-LBS SWL, GR80
7	1	4025	O-RING, N90-218, 1.234" ID x 0.139" DIA
8	10	731018	SCREW, CAP, HEX HD, 1"-8UNCX7-1/2", GR8, PLD, DRHD
9	1	5033	PIN, GRABBER, LWR LEG, CYL BASE
10	4	16764	SHACKLE, ANCHOR, BOLT-TYPE, G2130, 3/8", 1 TON
11	1	3018	SHACKLE, 2 TON, 1/2", TYPE G-2130
12	10	10637	WASHER, LOCK, HELICAL SPRING, 1", ALLOY, PLD
13	3	14732	SCREW, CAP, HEX HD, 5/8"-11UNC x 2", GR8, PLD, DR THD
14	3	9789	NUT, HEX LOCK, NYLON, 5/8"-11UNC, GR8, PLD
15	3	1097	PIN, COTTER, 1/8" OD, 1-1/2" LG, PLD
16	4	7855	WASHER, LOCK, HELICAL SPRING, 3/4", ALLOY, PLD
17	4	3731	SCREW, CAP, HEX HD, 3/4"-10UNCx1-1/2", Gr8, PLD, DR HD
18	2	1320005	DECAL "CAUTION ROTATING EQUIPMENT" 12" X 8"

					TITLE: Kit, Grabber Leg 250 HXI 700		
					DRAFTED: DenisG	DATE: 20OCT2006	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED: 	APPROVED: 	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100007	PAGE: 2 OF 2	REV: 0

GRABBER, 9 IN. ASSEMBLY (ONE-PIECE CLAMPING BOX)



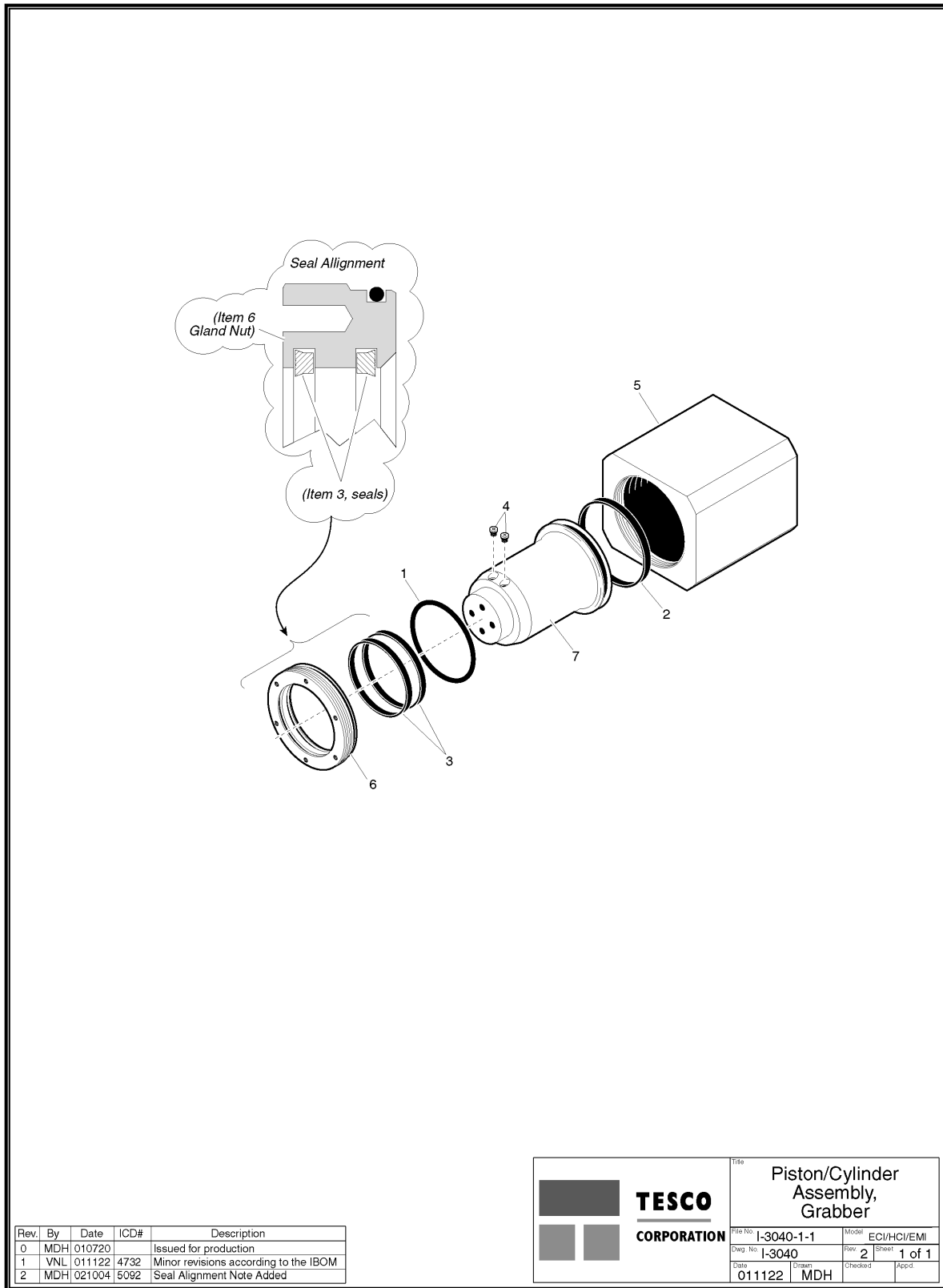
Rev.	By	Date	ICD#	Description
A	VNL	050505		Issued for manufacture
B	VNL	051031	HLR-18	Updated item 23

		Title	
		Grabber, 9"	
File No.	1-720457-1.ai	Model	ECI/HCI/EMI
Dwg. No.	1-720457	Rev.	B
Date	050505	Drawn	VNL
		Checked	1 of 1

Detailed Bill of Material**720457 Rev B
Grabber,9"**

Item	Qty	Units	Part Number	Description
01	1	EA	0404	Fitting,Hyd,Cap,#4FJIC,Stl
02	1	EA	0405	Fitting,Hyd,Cap,#6 JIC,Steel
03	2	EA	0612	O-Ring,N90-904,0.351"IDx0.072"Dia
04	8	EA	1044	Screw,Cap,Skt Hd,1/2"-13UNCx1-1/2"
05	4	EA	1045	Screw,Cap,Skt Hd,1/2"-13UNCx1"
06	4	EA	1079	Washer,Lock,Helical Spring,Hi-Collar,1/2",Black
07	1	EA	1488	Fitting,Hyd,Str,#4 MORBx#4 MJIC
08	1	EA	1500	Fitting,Hyd,Str,#6MJICx#4MORB
09	4	EA	1676	TONG DIES,1/2X1-1/4X5-7/8
10	1	EA	3040	CYLINDER,GRABBER
11	1	EA	3045	GUARD, HOSE
12	2	EA	3046	Pin,Retraction,6-7/8" 7-3/8" 8-1/2 & 9"Grabber
13	2	EA	3051	Holder,Die,7-3/8" 8-1/2" & 9"Grabber,ECI/HCI
14	2	EA	3054	PLATE,KEEPER,F/7-3/8&8-1/2,GRB
15	1	EA	3059	CAP, RETRACTION
16	2	EA	3060	EXTENSION, PORT
17	1	EA	3061	COVER, DIRT, GRAB
18	2	EA	3062	SHOE,CYLINDER, 8-1/2&9",2/UNIT
19	4	EA	3725	Screw,Cap,Hex Hd,3/8"-16UNCx1",Gr8,Pld,Dr Hd
20	4	EA	3727	Screw,Cap,Skt Hd,1/2"-13UNCx1-1/4",Dr Hd
21	1	EA	7002	BOX,TORQUING,GRABBER 9"
22	4	EA	7135	Washer,Lock,Helical Spring,3/8",Alloy,Pld
23	1	EA	810065 Rev B	Clamping Box,Machining,Grabber Box, 9.00
910	7	HR	LABOUR - MECH	Labour - Mechanical

PISTON/CYLINDER ASSEMBLY, GRABBER



Rev.	By	Date	ICD#	Description
0	MDH	010720		Issued for production
1	VNL	011122	4732	Minor revisions according to the IBOM
2	MDH	021004	5092	Seal Alignment Note Added

		Title		Piston/Cylinder Assembly, Grabber	
		File No.	I-3040-1-1	Model	ECI/HCI/EMI
Date	011122	Drawn	MDH	Checked	Appd
Rev.	2	Sheet	1 of 1		



Parts List

Part #	3040
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Drawing # I-3040

Rev. 2

Refer: 1 Illustration

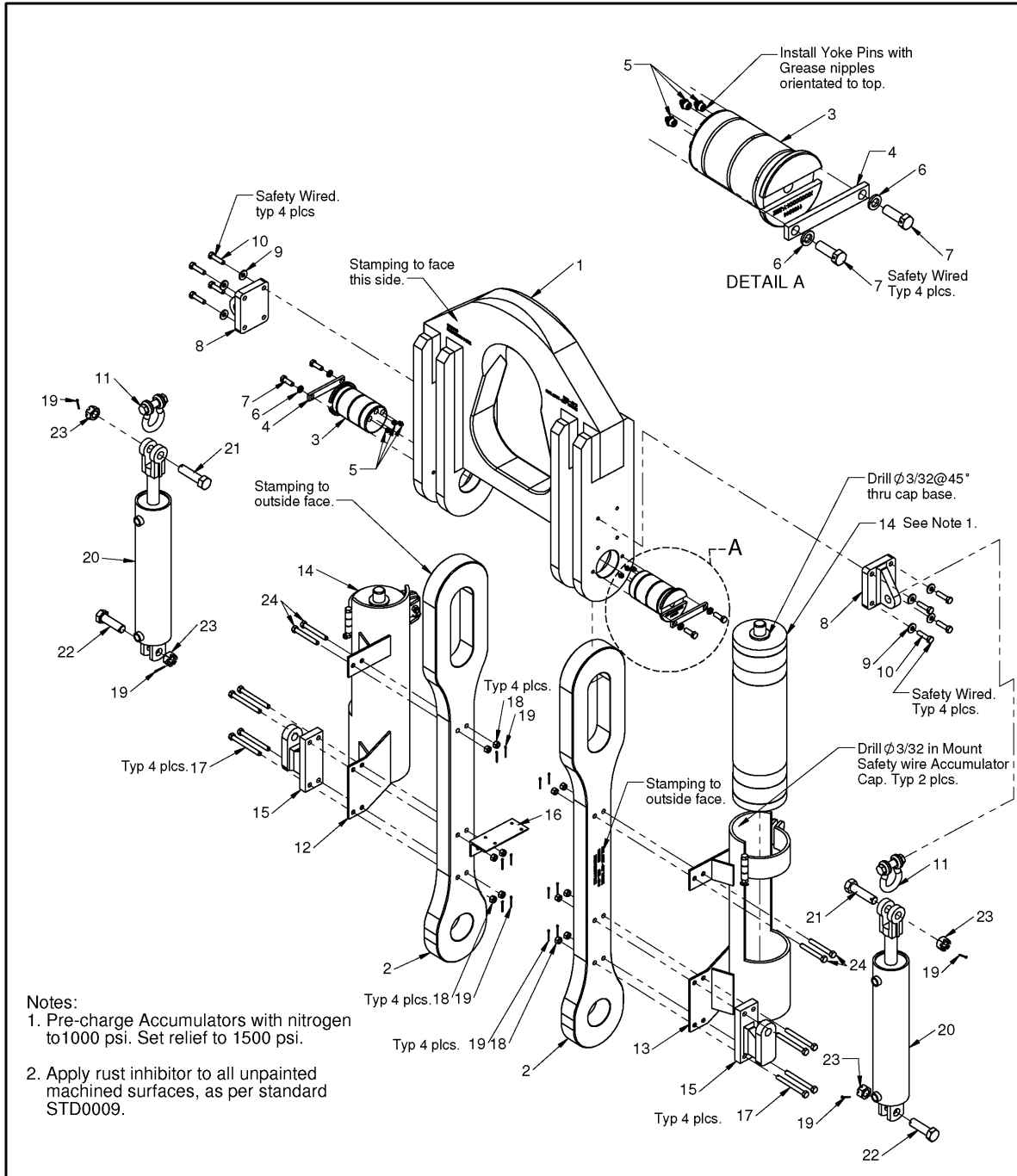
File # I-3040.xls

Page 2 of 2

Drawing Title: CYLINDER,GRABBER

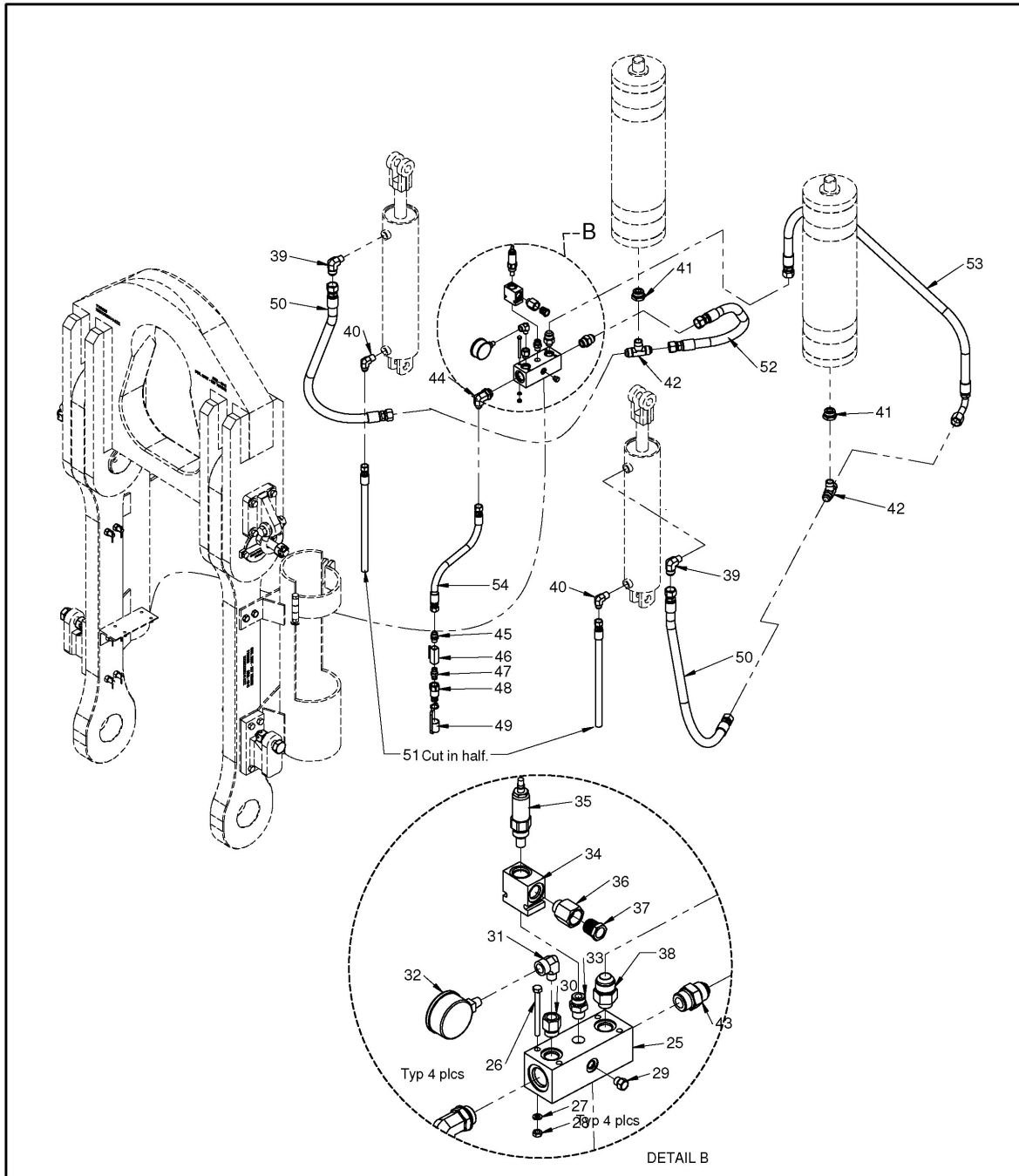
Item #	Tesco #	Qty	Description
1	0610	1	O RING, DURO, 70, NITRIL
2	0640	1	SEAL, GRABBER, UNI-RING
3	0642	2	POLYPAK, SEAL, F/GRABBER
4	2799	2	FTG, HYD. PLUG, SKT, 1/4 MALE, ORB
5	3056	1	CYLINDER, GRABBER BOX
6	3057	1	GLAND, NUT, GRAB CYL
7	3058	1	PISTON, GRAB CYL

KIT, SWIVEL YOKE & COUNTERBALANCE, 250-HXI-700





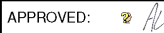
- Notes:
1. Pre-charge Accumulators with nitrogen to 1000 psi. Set relief to 1500 psi.
 2. Apply rust inhibitor to all unpainted machined surfaces, as per standard STD0009.

					TITLE: Kit, Swivel Yoke & Counterbalance 250 HXI 700		
					DRAFTED: DenisG	DATE: 08JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100020	PAGE: 1 OF 3	REV: 0	



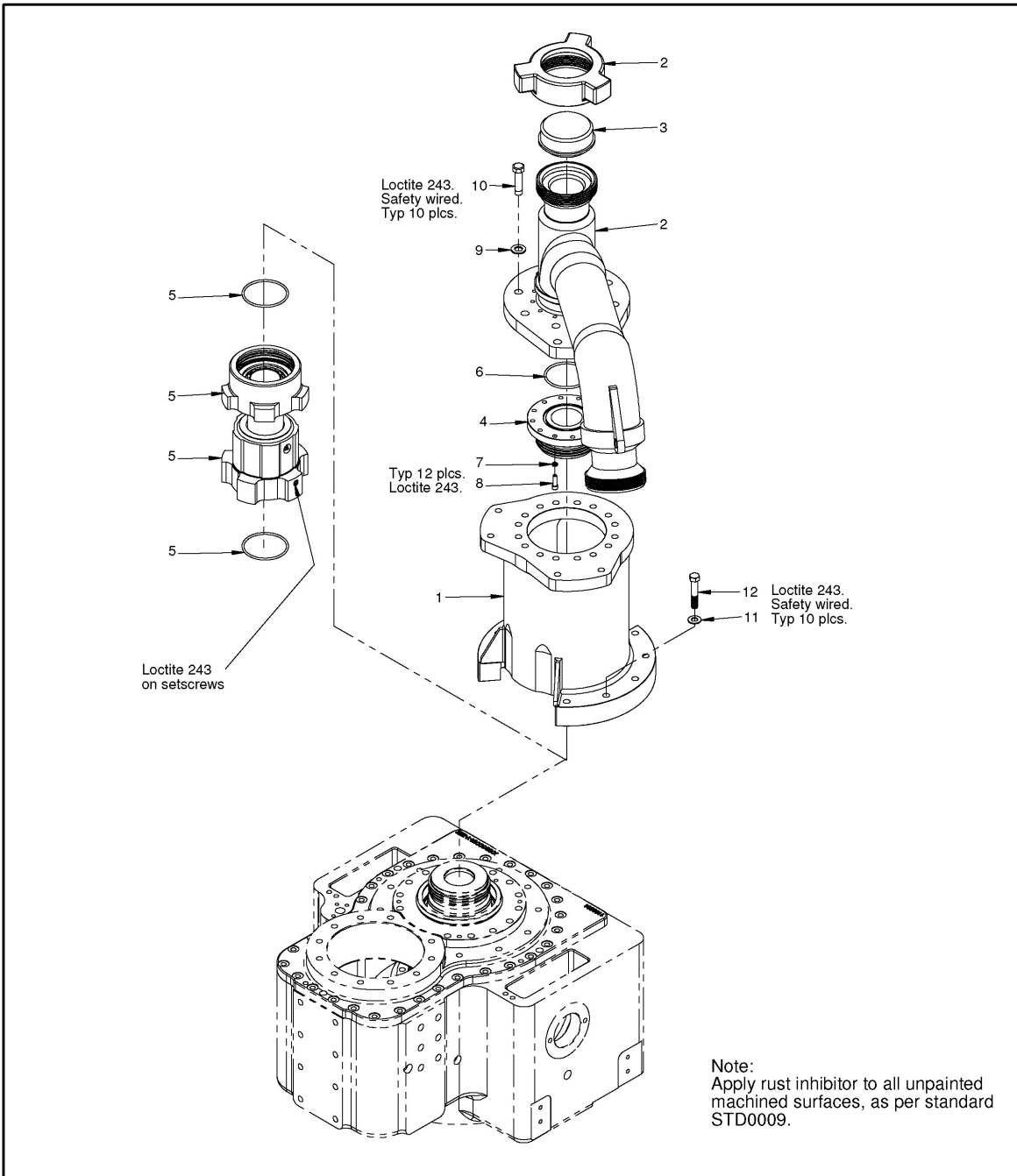
					TITLE: Kit, Swivel Yoke & Counterbalance 250 HXI 700		
					DRAFTED: DenisG CHECKED:  DWG NO: 1100020	DATE: 08JAN2007 APPROVED: 	REV: 0
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007				
REV	ECN	DESCRIPTION	DATE				

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100036	YOKE, SWIVEL, MACHINED, 250HXI700
2	2	1100038	LINK, SWIVEL, 250HXI700
3	2	1100044	PIN, YOKE, SWIVEL LINK, 250HXI700
4	2	6200	RETAINER, PIN, SWIVEL LINK
5	6	1112	FITTING, GREASE, STR, LONG, 1/8" MNPT
6	4	5881	WASHER, LOCK, HEL. SPRING, 1/2"
7	4	3116	SCREW, CAP, HEX HD, 1/2"-13UNC x 1-1/2" LG, DR HD
8	2	1100125	LUG, SWIVEL YOKE, COUNTERBALANCE, HXI
9	8	10373	WASHER, BELLEVILLE, 9900-LBS, 1/2"IDx1.260"OD, STL
10	8	3536	SCREW, CAP, HEX HD, 1/2" x 2", DR HD
11	2	4770	SHACKLE, ANCHOR, BOLT-TYPE, G-2130, 3/4", 4-3/4 TON
12	1	1100040	MOUNT, ACCUMULATOR, DS ASSEMBLY 250HXI700
13	1	1100042	MOUNT, ACCUMULATOR, ODS, ASSEMBLY, 250HXI700
14	2	1100072	ACCUMULATOR, 2 GALLON, 3000 PSI, #16FORB
15	2	1100126	LUG, SWIVEL LINK, COUNTERBALANCE, 250HXI700
16	1	810522	BRACKET, RELIEF MANIFOLD, COUNTER BALANCE, 250HXI700
17	8	5972	SCREW, CAP, HEX HD, 1/2"-13 UNC x 5", GR8, PLD, DR THD
18	12	9784	NUT, HEX, LOCK, NYLON, 1/2"-13 UNC GR8
19	16	1097	PIN, COTTER, 1/8" OD, 1-1/2" LG, PLD
20	2	9520	PRINCESS AUTO CYL BODY DWG 3008
21	2	5333	SCREW CAP HEX HD 1"- 8UNC X4"GR8, DRILLED THREAD
22	2	3742	SCREW,CAP,HEX Hd,1"-8UNCx3-1/2",GR8,PLd,DR THD
23	4	2348	NUT,HEX,SLOTTED,1"-8UNC,GR2
24	4	5971	SCREW, CAP, HEX HD, 1/2"-13UNC x 4", GR8,PLD,DR THD
25	1	8027	MANIFOLD,COUNTER BALANCE
26	4	0993	SCREW,CAP,HEX HD,1/4"-20UNCx3",GR8,PLD
27	4	10634	WASHER,LOCK,HELICAL SPRING,1/4",ALLOY,PLD
28	4	9785	NUT, HEX, LOCK, NYLON, 1/4"-20 UNC, GR8, PLD
29	1	2802	FITTING,HYD,PLUG,HEX HD,#4MORB
30	1	12341	FITTING,HYD,STR,#8MORBx#4FNPT
31	1	0254	FITTING,HYD,90°ELB,#4MNPTx#4FNPT
32	1	0061	GAUGE,LIQ FILLED,0-3000PSI,2.5"ODx1/4"MNPT,LM
33	1	0227	FITTING,HYD,STR,#8MORBx#6MNPT
34	1	2021	BODY,CARTRIDGE,RELIEF,2 WAY,#8 SAE
35	1	0031	VALVE,RELIEF,DIR ACT,CART,10 GPM,600-3600 PSI
36	1	0233	FITTING,HYD,STR,#8MORBx#8FNPT
37	1	2603	BREATHER AIR,1/2"MNPT
38	1	2983	FITTING,HYD,STR,#12MJICx#8MORB
39	2	0319	FITTING,HYD,90°ELB,#12MJICx#8MNPT
40	2	0318	FITTING,HYD,90°ELB,#8MJICx#8MNPT
41	2	12346	FITTING,HYD,STR,#16MORBx#12FNPT
42	2	0357	FITTING,HYD,TEE,#12MJICx#12MJICx#12MNPT-BR
43	1	1493	FITTING,HYD,STR,#12MJICx#12MORB
44	1	0198	FITTING,HYD,90°ELB,#8MJICx#12MORB
45	1	0298	FITTING,HYD,STR,#8MJICx#6MNPT
46	1	6115	VALVE,NEEDLE,3/8 FE/FE,6000PSI,F/HMI
47	1	0238	FITTING,HYD,STR,#6MNPTx#6MNPT
48	1	0418	DISCONNECT,QUICK,NIPPLE,74SERIES,3/8"x3/8"FNPT
49	1	3460	CAP,QUICK DISCONNECT,NIPPLE,74-Ser,3/8"
50	2	3026	HOSE,HYD,100R2-AT,#12X33",FJICXFJIC
51	1	3490	HOSE,HYD,100R2-AT,#8X32",FJICXFJIC
52	1	1320245	HOSE,HYD,100R2-AT,#12X23.5",FJICXFJIC
53	1	1320246	HOSE,HYD,100R2-AT,#12X46",FJICXLONG 90°FJIC
54	1	5459	HOSE,HYD,100R2-AT,#8X36",FJICXFJIC

					TITLE: Kit, Swivel Yoke & Counterbalance 250 HXI 700		
					DRAFTED: DenisG	DATE: 08JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100020	PAGE: 3 OF 3	REV: 0	

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KIT, BONNET, GOOSENECK, WASHPIPE, 250-HXI-700

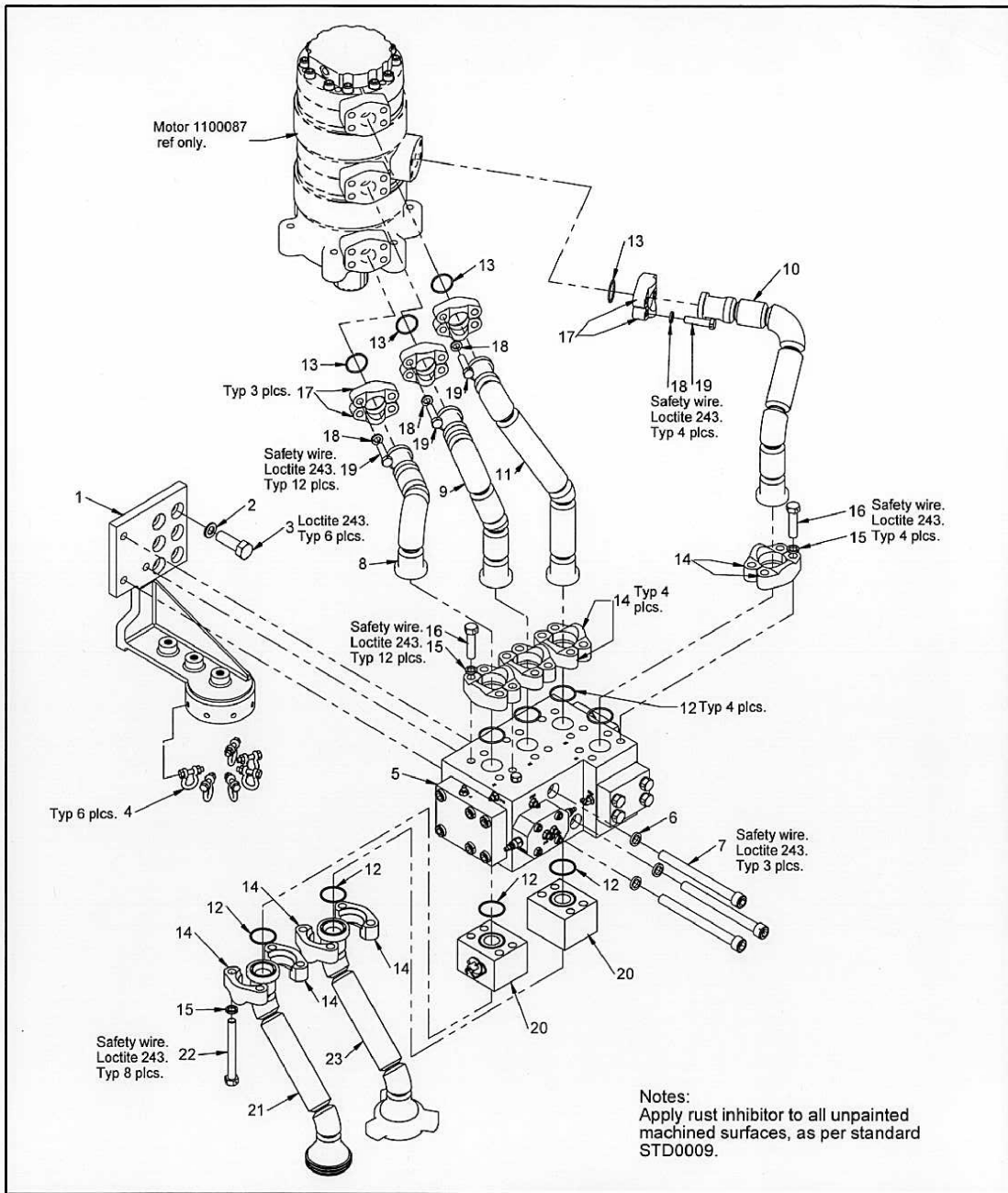


					TITLE: Kit, Bonnet, Gooseneck&Washpipe, 250 HXI 700		
					DRAFTED: DenisG	DATE: 29NOV2006	
				CHECKED: ?	APPROVED: ?		
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	DWG NO: 1100021			
REV	ECN	DESCRIPTION	DATE	PAGE: 1 OF 2			
				REV: 0			

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100012	BONNET MACHINING 250 HXI 700
2	1	13771	GOOSENECK, MACHINING, EMI
3	1	13553	SUB,BLIND,MALE,UNION,HAMMER,4", FIG 1002
4	1	15063	NIPPLE, GLAND NUT, WASHPIPE EMI
5	1	13097	WASHPIPE, ASSEMBLY, EMI
6	1	13394	O-RING,N90-348,4.35"IDX0.21"DIA
7	12	3690	WASHER,LOCK,HELICAL SPRING,HI-COLLAR,3/8",BLACK
8	12	3155	SCREW, CAP, SKT HD, 3/8" -16UNC x 1-1/4"
9	10	9231	WASHER, FLAT, TYPE A, NARROW, 3/4", HARDENED, PLD
10	10	13557	SCREW,CAP,HEX,3/4"-10X3",GR8,PLD,DR HD
11	10	9232	WASHER,FLAT,TYPE A,NARROW 5/8" HARDENED PLD
12	10	11159	SCREW, CAP, HEX HD, 5/8"-11UNC x 3-1/2", GR8, PLD, DR HD

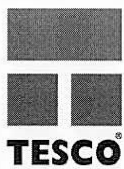

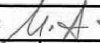
					TITLE: Kit, Bonnet, Gooseneck&Washpipe, 250 HXI 700		
					DRAFTED: DenisG	DATE: 29NOV2006	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED:  	APPROVED:  	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100021	PAGE: 2 OF 2	REV: 0

KIT, MOTOR MANIFOLD, 250-HXI-700



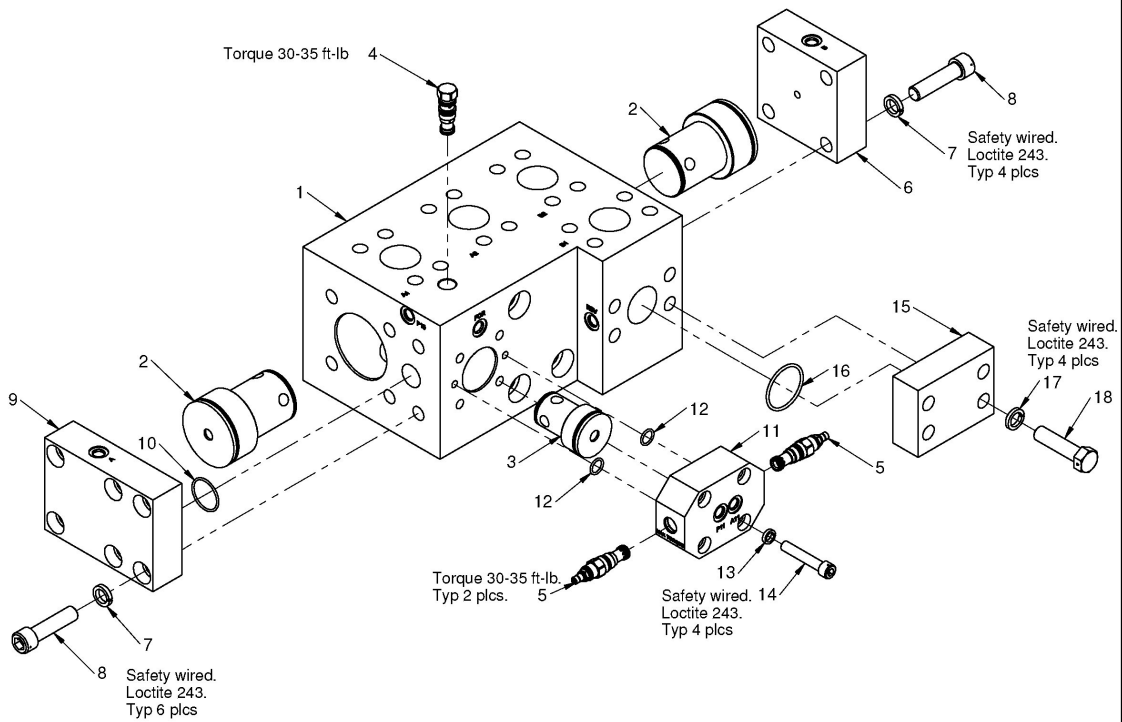
REV	ECN	BY	DESCRIPTION	DATE	TITLE: Kit, Motor Manifold, 250 HXI 700		
1	081-0042	LJW	Part number of item 20 revised	13Sept2007	DRAFTED: DenisG	DATE: 12APR2007	
0	132-0005		ISSUED FOR PRODUCTION	25JUN2007	CHECKED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	
					DWG NO: 1100022	PAGE: 1 OF 2	REV: 1

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100090	MOUNT, MOTOR MANIFOLD, MACHINE, 250HXI700
2	6	9231	WASHER, FLAT, TYPE A, NARROW, 3/4", HARDENED, PLD
3	6	1002	SCREW,CAP,HEX HD,3/4"-10UNCx1-1/2",GR8,PLD
4	6	16764	SHACKLE,ANCHOR, BOLT-TYPE,G2130,3/8",1 TON
5	1	590224	MOTOR, MANIFOLD, 250HXI700
6	3	1061	WASHER, LOCK, HEL SPRING, HI-COLLAR, 7/8"
7	3	1100066	SCREW,CAP,SKT HD,7/8"-9UNCx10",DR HD
8	1	1100051	PIPE ROUTE, MOTOR, A1, WELDMENT, 250HXI700
9	1	1100052	PIPE ROUTE, MOTOR, A2, WELDMENT, 250HXI700
10	1	1100053	PIPE ROUTE, MOTOR, B1, WELDMENT, 250HXI700
11	1	1100054	PIPE ROUTE, MOTOR, B2, WELDMENT, 250HXI700
12	8	0598	O-RING,N90-228,2.234"IDX0.139"DIA
13	4	0594	O-RING,N90-225,1.859"IDX0.139"DIA
14	6	8823	FLANGE,SPLIT,C62,2" (Set of two)
15	24	7855	WASHER,LOCK,HELICAL SPRING,3/4",ALLOY,PLD
16	16	13557	SCREW,CAP,HEX HD,3/4"-10UNCx3",GR8,PLD,DR HD
17	4	6196	FLANGE,SPLIT,C62,1-1/2" (Set of two)
18	16	3687	WASHER, LOCK, HELICAL SPRING, 5/8", ALLOY, PLD
19	16	1100067	SCREW,CAP,HEX Hd,5/8"-11UNCx2-1/2",GR8,PLD,DR HD
20	2	1100175	Modification, Valve, Ball, 250HXI700
21	1	1100127	PIPE ROUTE, MANIFOLD, FORWARD, WELDMENT, 250HXI700
22	8	1100130	SCREW,CAP,HEX HD,3/4"-10UNCx6-1/2",GR8,PLD,DR HD
23	1	1100128	PIPE ROUTE, MANIFOLD, REVERSE, WELDMENT, 250HXI700


					TITLE: Kit, Motor Manifold, 250 HXI 700		
1	081-0042	Part number of item 20 revised	13Sept2007		DRAFTED: DenisG	DATE: 12APR2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100022	PAGE: 2 OF 2	REV: 1	

MOTOR MANIFOLD, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	590225	MANIFOLD, MOTOR, CODE 62, MACHINING, 250HXI700
2	2	2075	VALVE, POPPET, DIRECTIONAL, BOSCH
3	1	10845	VALVE, NG32 LOGIC POPPET RELIEF
4	1	1100062	VALVE, SHUTTLE, 2.5 GPM
5	2	1100063	VALVE, RELIEF, 25 GPM, 150-6000 PSI, CARTRIDGE
6	1	590226	COVER 1, NG50, MACHINING, 250HXI700
7	10	3196	LOCKWASHER, HI COLLAR, 3/4"
8	10	820120	SCREW, CAP, SKT HD, 3/4"-10UNCx3", DR HD
9	1	590227	COVER 2, NG50, MACHINING, 250HXI700
10	1	340065	O-RING, N70-130, 1.612"IDx0.103" DIA
11	1	590228	COVER, NG32, MACHINING, 250HXI700
12	2	340054	O-RING, N70-115, 0.674"IDx0.103" DIA
13	4	1079	WASHER, LOCK, HELICAL SPRING, HI-COLLAR, 1/2", BLACK
14	4	731126	SCREW, CAP, SKT HD, 1/2"-13UNCx2", DR HD
15	1	590229	COVER, C62, 2", MACHINING, 250HXI700
16	1	4026	O-RING, N70-228, 2.234"IDx 0.139" DIA
17	4	7855	WASHER, LOCK, HELICAL SPRING, 3/4", ALLOY, PLD
18	4	13557	SCREW, CAP, HEX HD, 3/4"-10UNCx3", GR8, PLD, DR HD

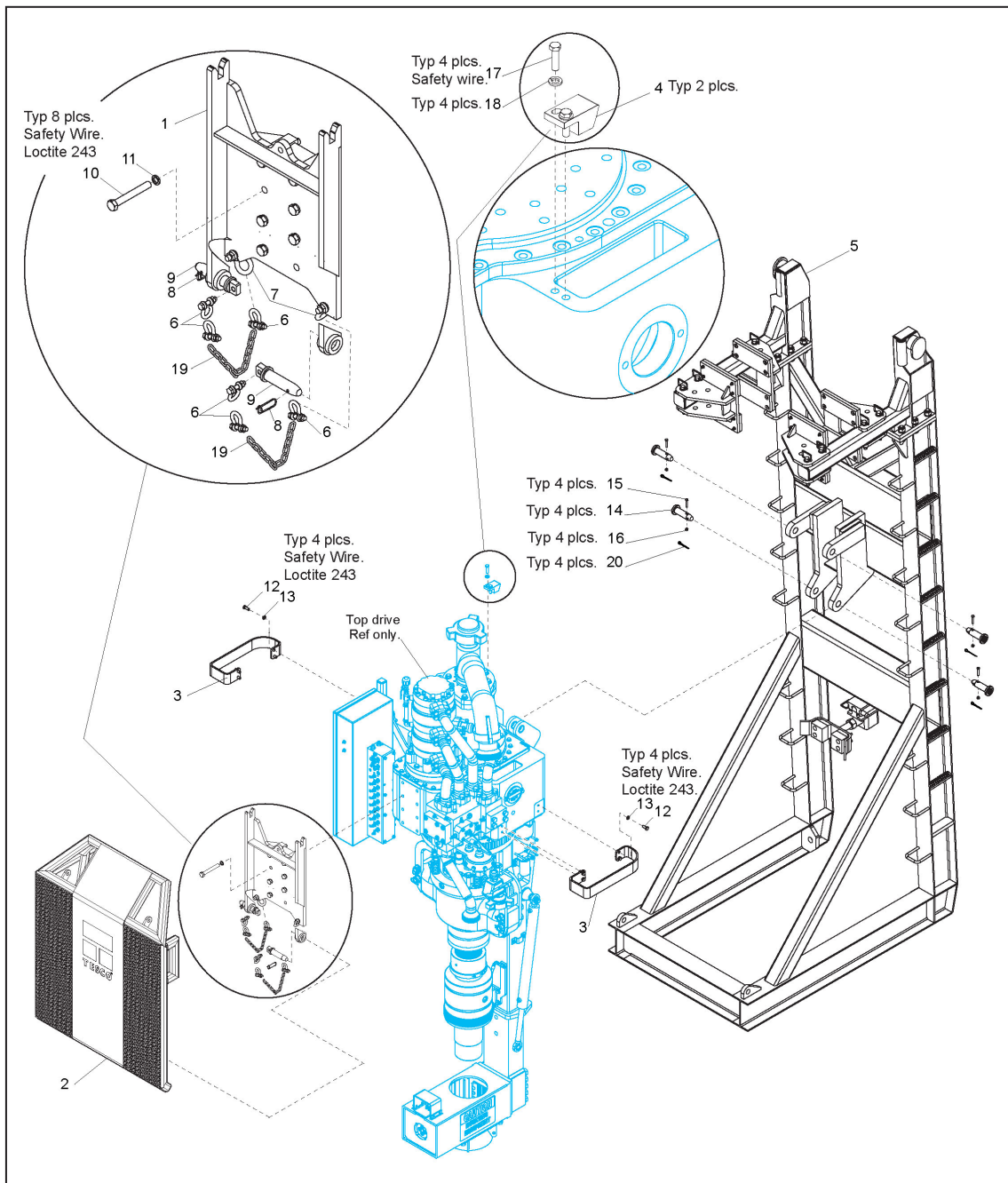



Notes:
Apply rust inhibitor to all unpainted machined surfaces, as per standard STD0009, excluding internal bores of manifold.

					TITLE: Motor Manifold 250 HXI 700		
					DRAFTED: DenisG	DATE: 26APR2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED:	APPROVED:		
REV	ECN	DESCRIPTION	DATE	DWG NO: 590224	PAGE: 1 OF 1	REV: 0	

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KIT, ACCESSORIES, 250-HXI-700

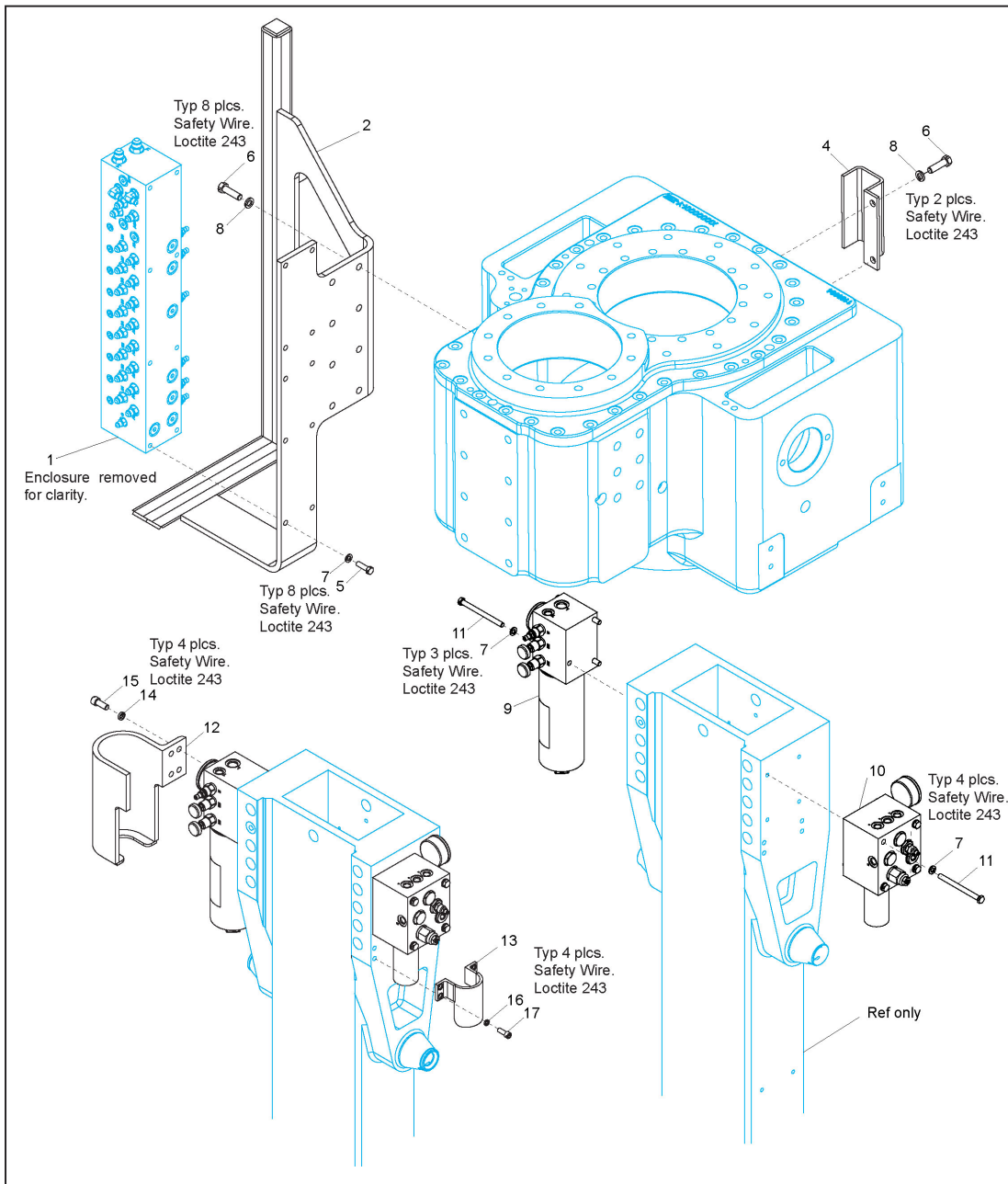





					TITLE: Kit, Accessories, 250 HXI 700		
1	081-0039	REPLACE ITEM 3	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED:	APPROVED:		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100023	PAGE: 1 OF 2	REV 1	

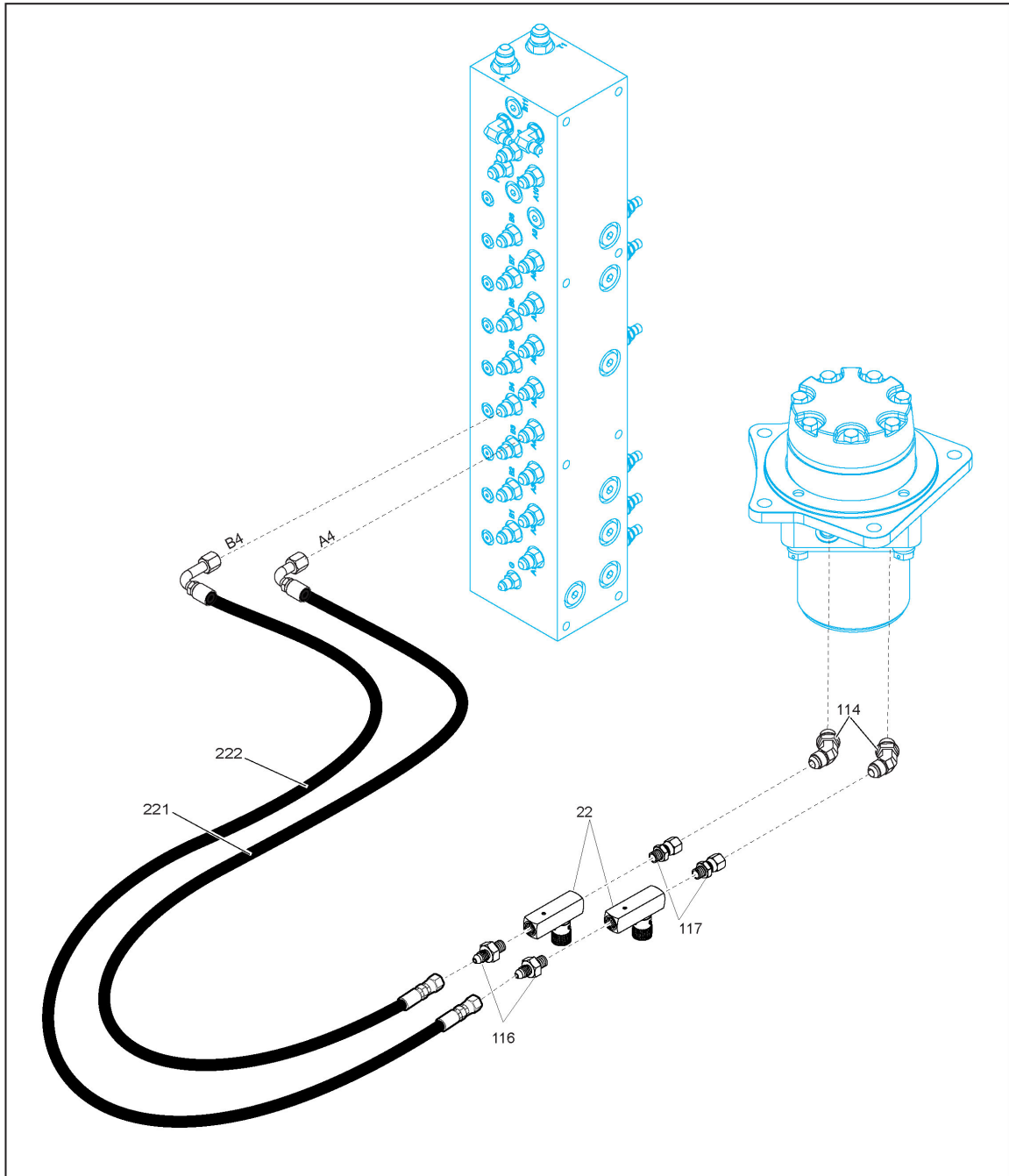
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100131	MOUNT, FRONT GUARD, 250HXI700
2	1	1100132	GUARD, TUGGER LINE, 250HXI700
3	2	810520	SIDE GUARD, 250HXI700
4	2	1100111	PLATE, STOP, SWIVEL LINK, 250HXI700
5	1	1100082	STAND, TRAVEL, ASSEMBLY, 250HXI700
6	6	16764	SHACKLE, ANCHOR, BOLT-TYPE, G2130, 3/8", 1 TON
7	2	3018	SHACKLE, ANCHOR, BOLT-TYPE, G-2130, 1/2", 2 TON
8	2	2361	PIN, SAFETY, 1/8"WIRE-ODX3-1/8"USABLE-LG
9	2	1100134	PIN, GUARD, 250HXI700
10	8	1100135	SCREW, CAP, HEX HD, 3/4"-10UNCX5-1/2", GR8, PLD, DR HD
11	8	7855	WASHER, LOCK, HELICAL SPRING, 3/4", ALLOY, PLD
12	8	5966	SCREW, CAP, HEX HD, 1/2"-13UNCX1-1/4", GR8, PLD, DR HD
13	8	5881	WASHER, LOCK, HELICAL SPRING, 1/2", ALLOY, PLD
14	4	3384	PIN, EXTEND ARM, 1.5"ODX6-1/4"LG
15	4	1320002	SCREW, CAP, HEX HD, 3/8"-16UNCX2-1/4", GR8, PLD, DR THD
16	4	4333	NUT, HEX, LOCK, NYLON, 3/8"-16UNC, GR8, PLD
17	4	3116	SCREW, CAP, HEX HD, 1/2"-13UNCX1-1/2", DR HD
18	4	5881	WASHER, LOCK, HELICAL SPRING, 1/2", ALLOY, PLD
19	2	1852	CHAIN, LINK, PASSING, ZINC, 3/16", X 10"LG
20	4	15608	PIN, COTTER, 3/32"OD x 3/4" LG, PLD

					TITLE: Kit, Accessories, 250 HXI 700		
1	081-0039	REPLACE ITEM 3	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100023	PAGE: 2 OF 2	REV 1	

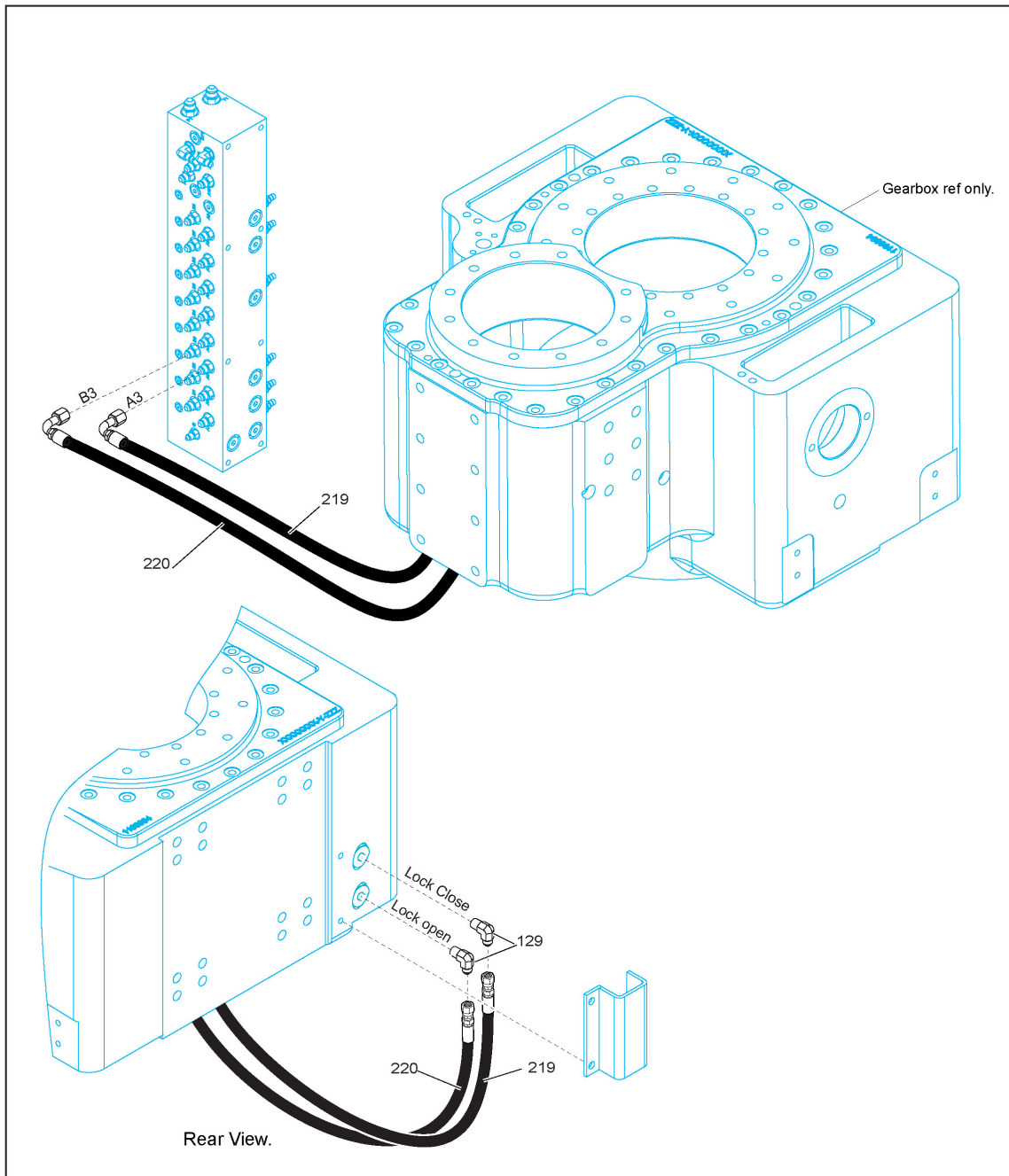
KIT, AUXILIARY HYDRAULICS, 250-HXI-700



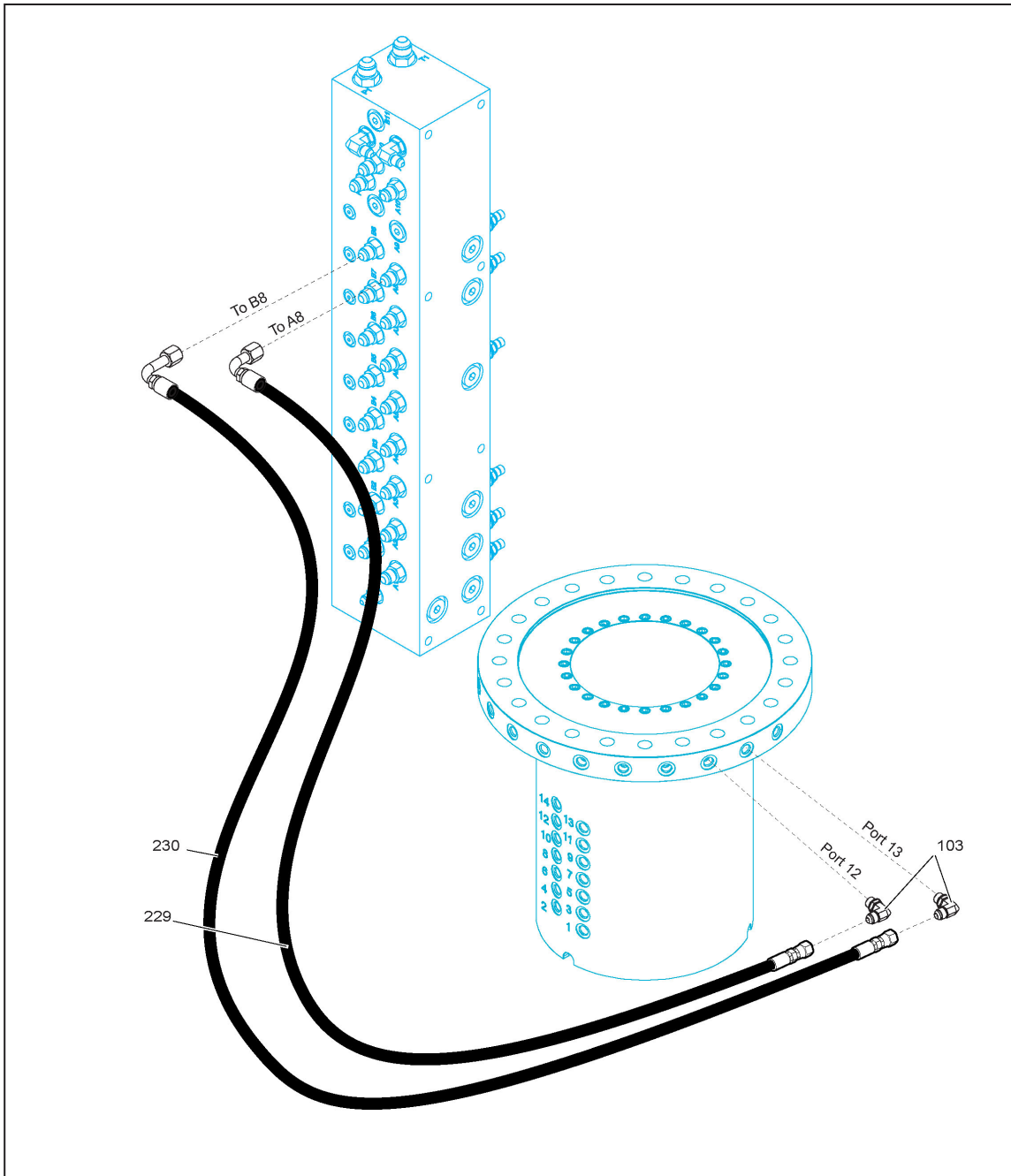
					TITLE: Kit, Aux Hydraulics, 250 HXI 700		
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0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE: 1 OF 14	REV 1	



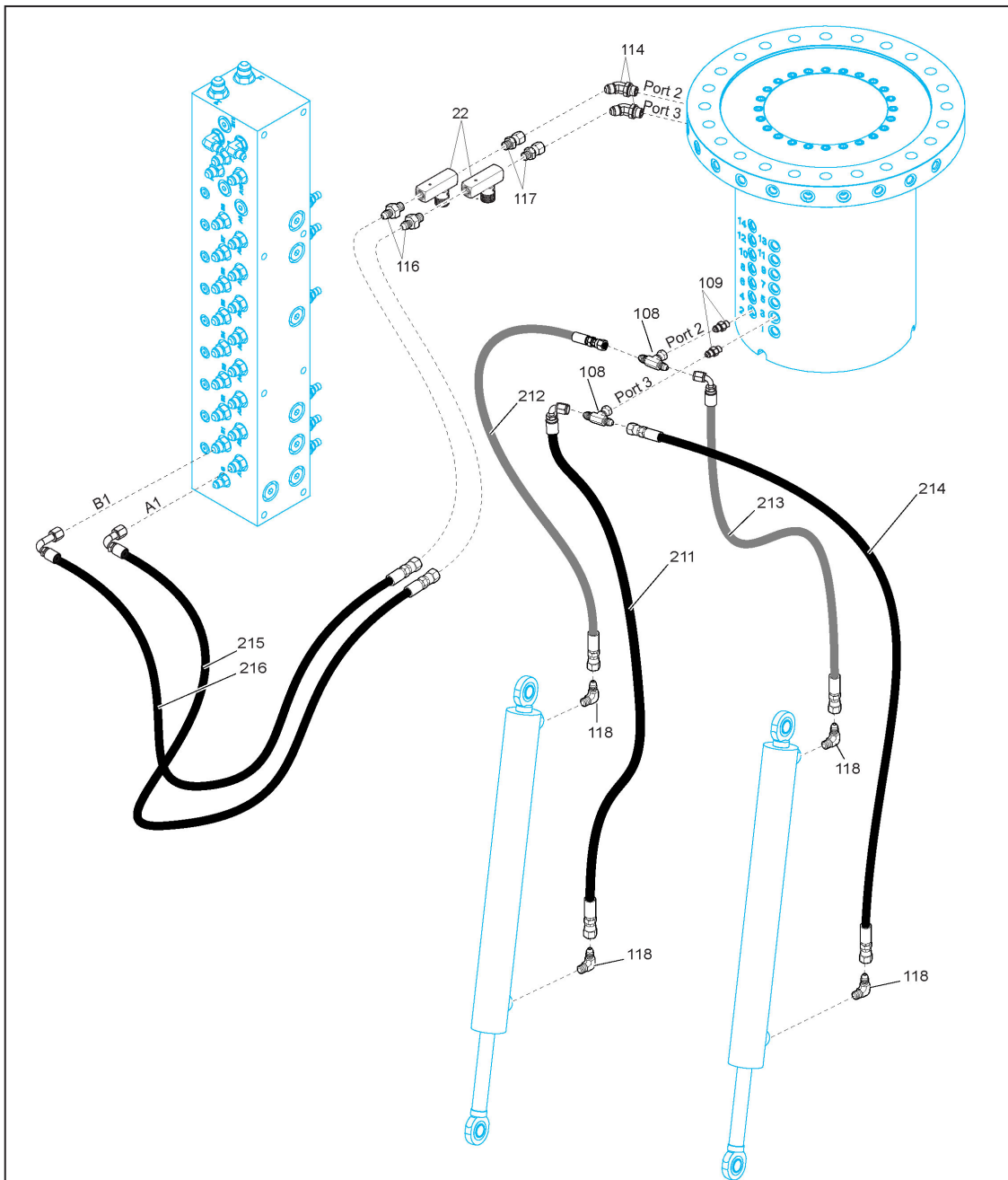
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0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED:	APPROVED:	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100047	PAGE: 2 OF 14	REV 1



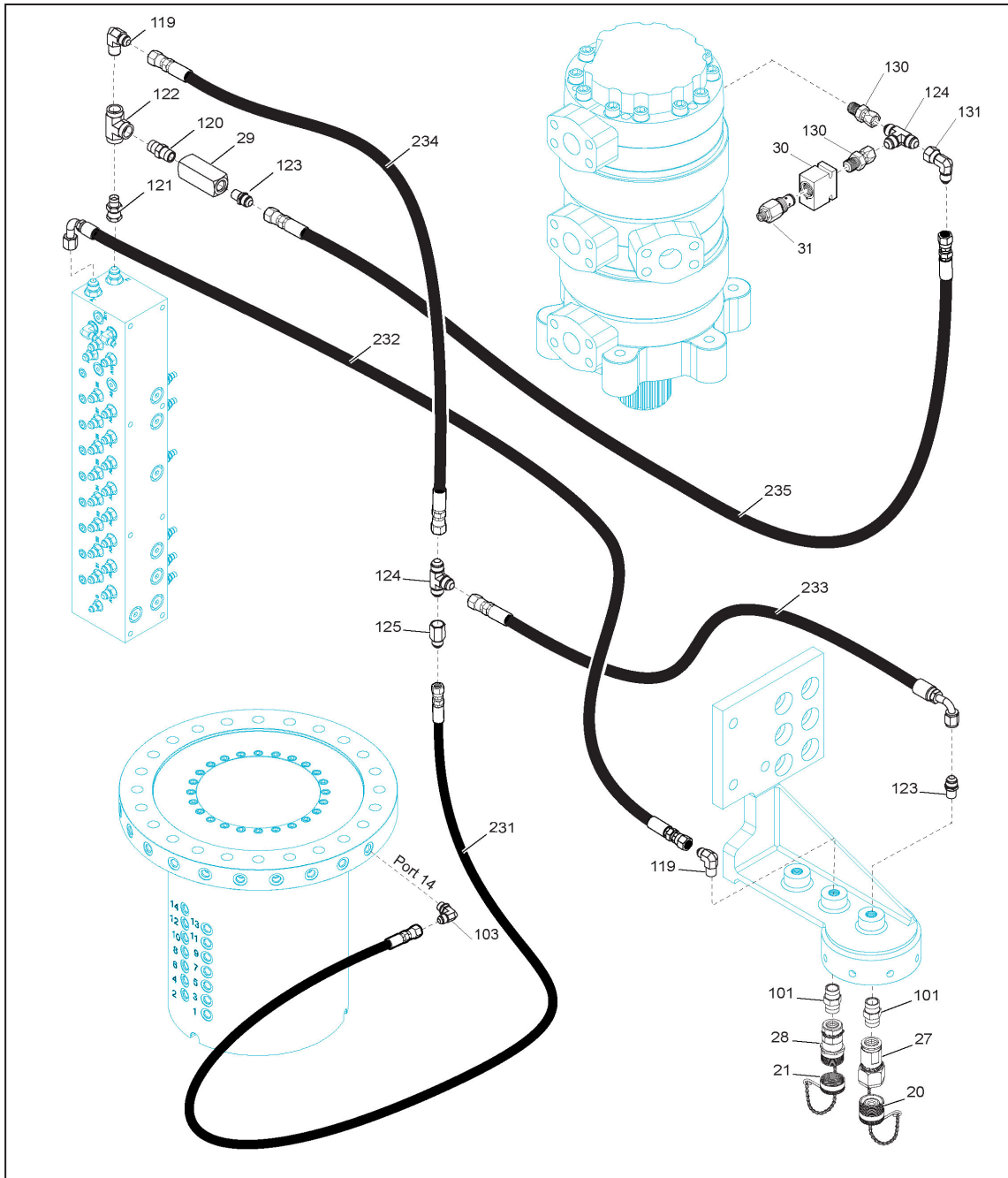
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REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE: 3 OF 14	REV 1	



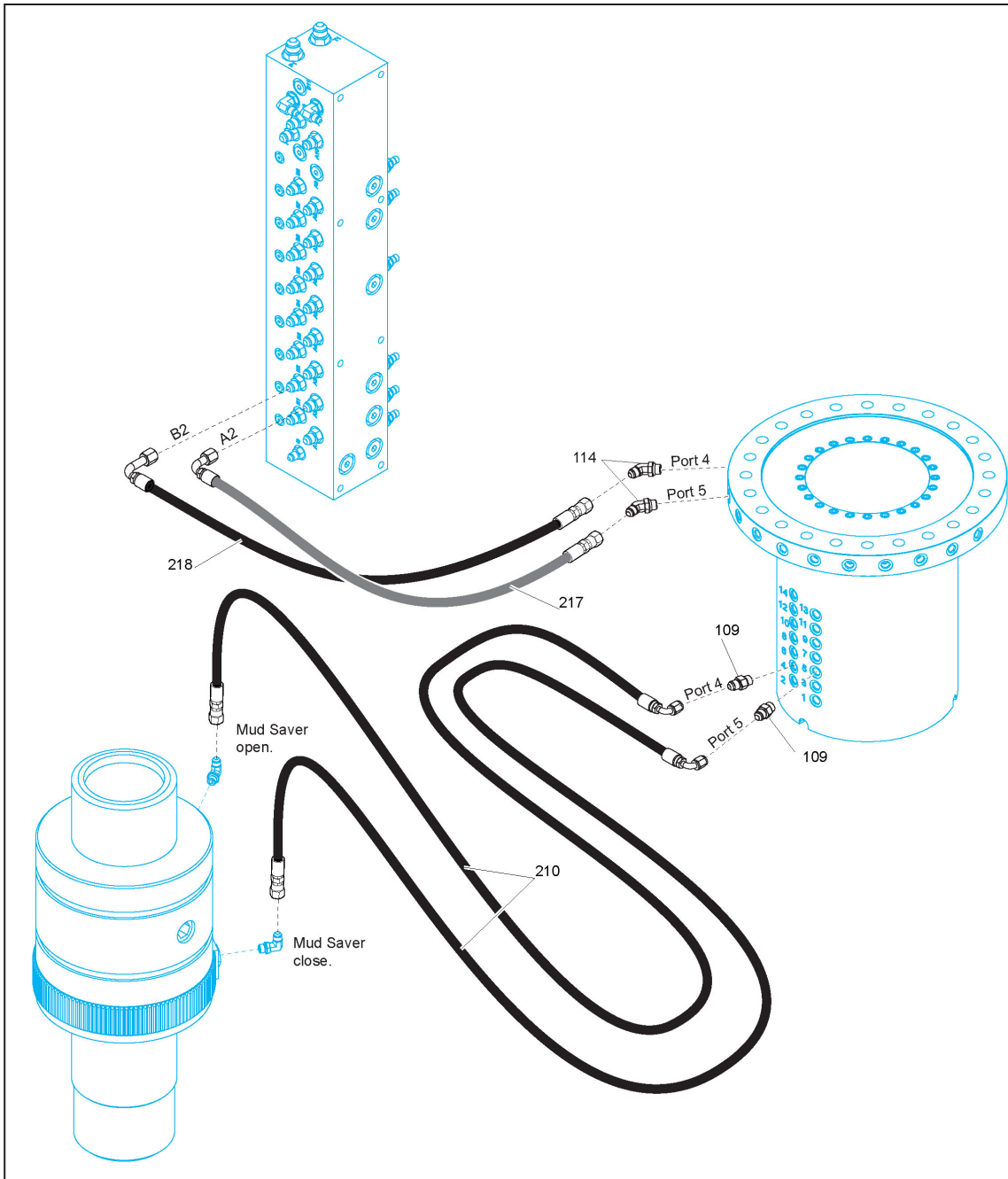
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REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE: 4 OF 14	REV 1	



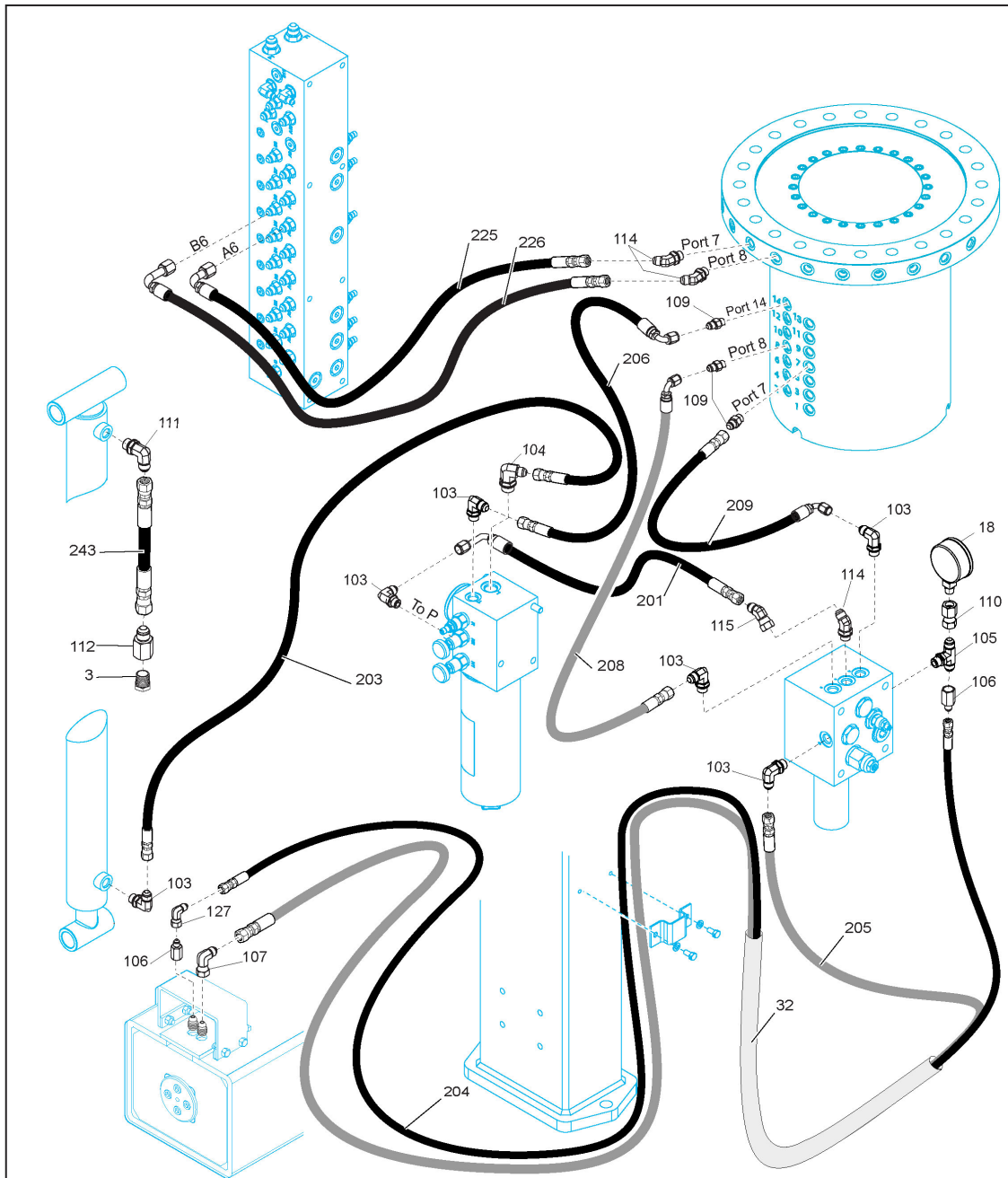
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0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED:	APPROVED:	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100047	PAGE: 5 OF 14	REV 1



					TITLE: Kit, Aux Hydraulics, 250 HXI 700		
1	081-0039	REPLACE ITEM 2	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
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REV	ECN	DESCRIPTION	DATE		DWG NO: 1100047	PAGE: 6 OF 14	REV 1

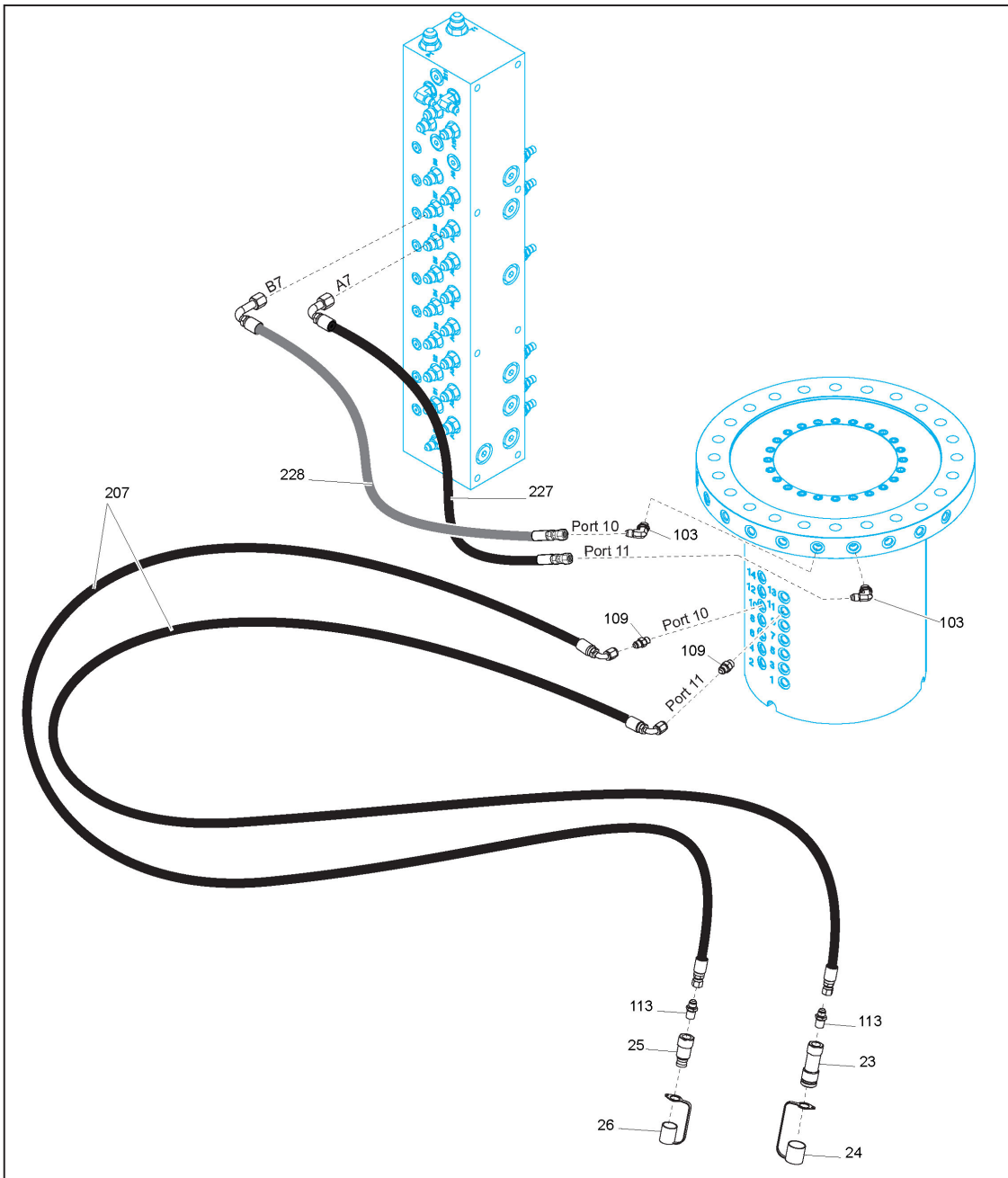


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REV	ECN	DESCRIPTION	DATE		DWG NO: 1100047	PAGE: 7 OF 14	REV 1

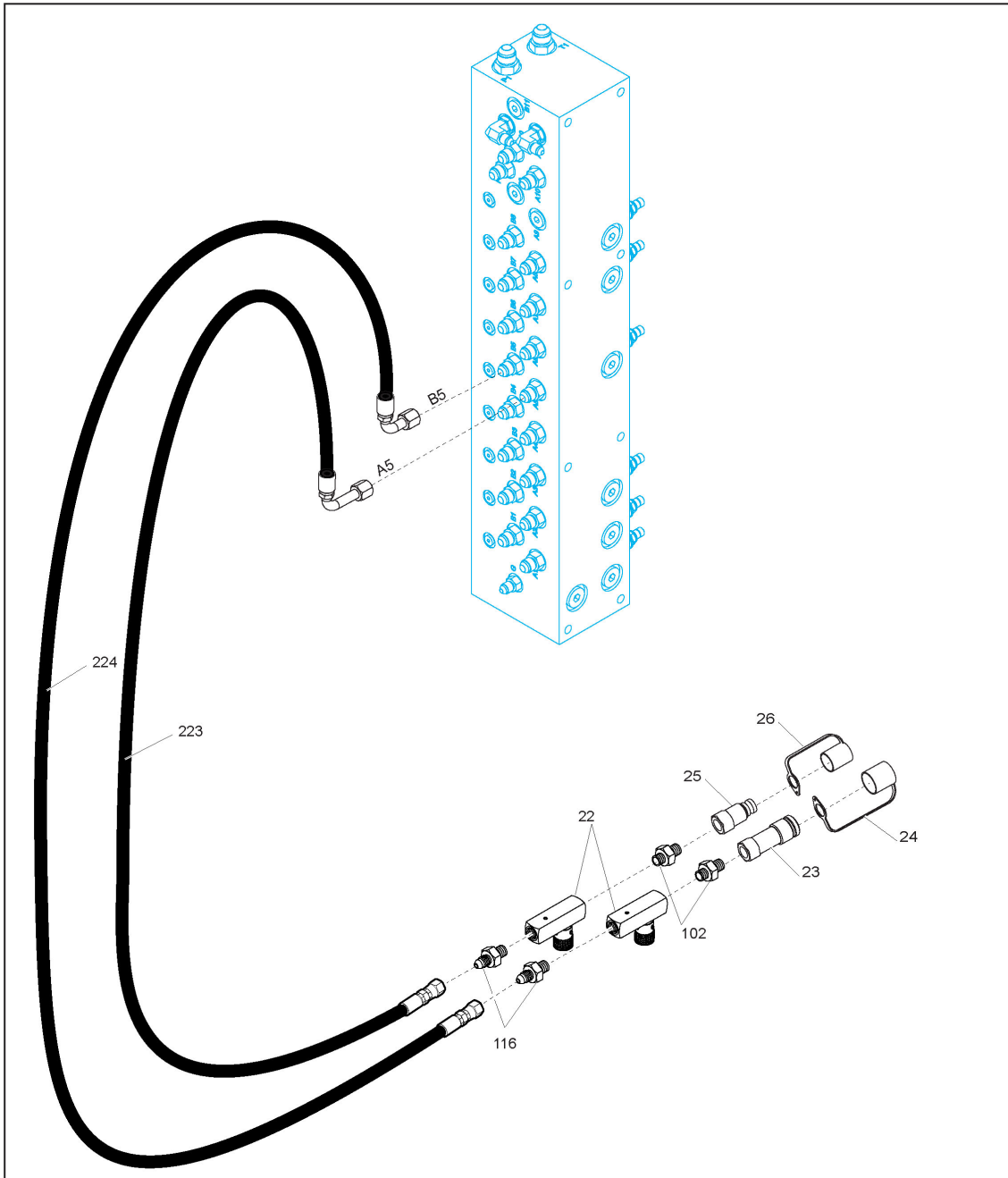


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				CHECKED: APPROVED:	
				DWG NO: 1100047	PAGE: 8 OF 14 REV 1

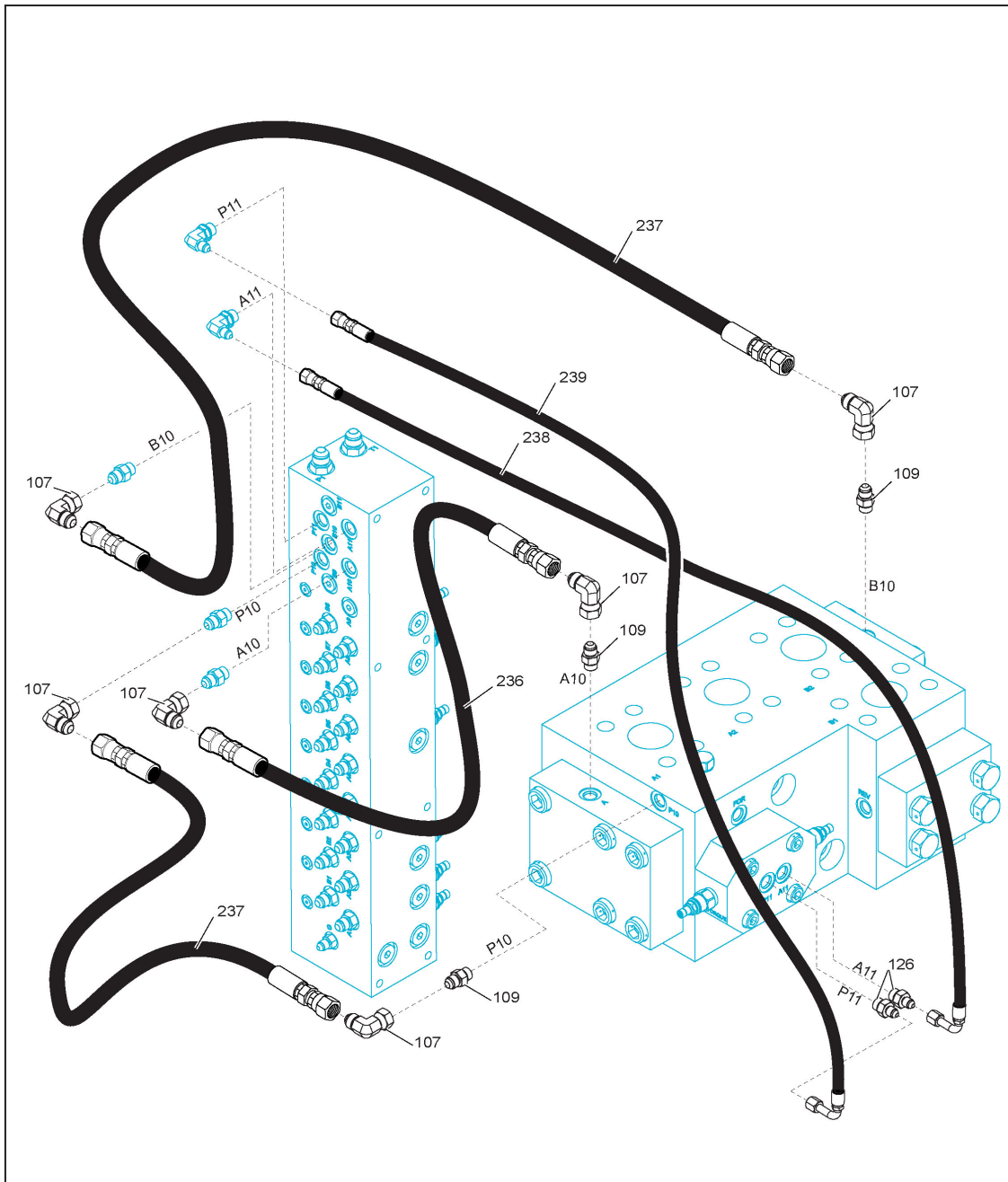





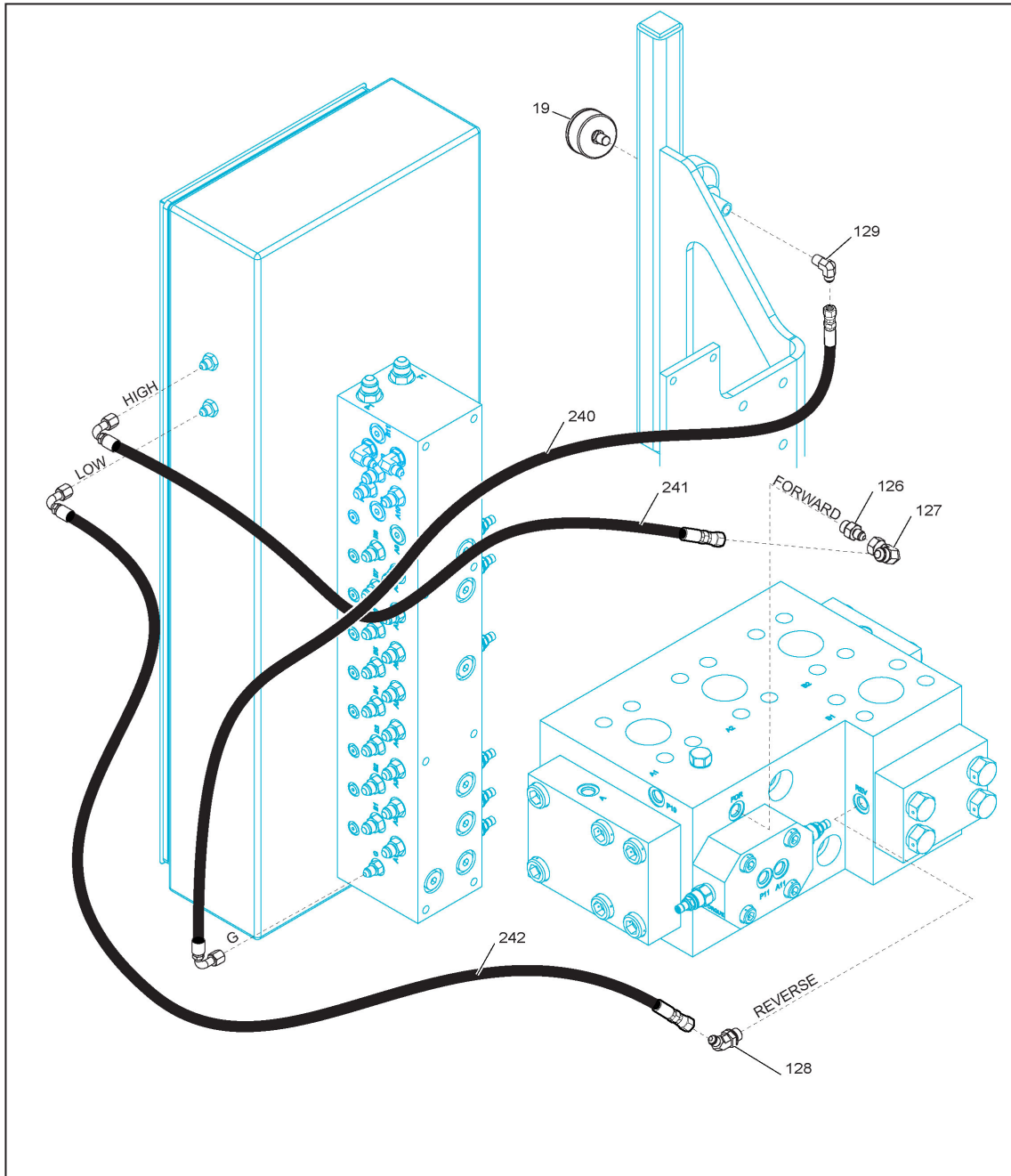
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REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE: 9 OF 14	REV 1	



					TITLE: Kit, Aux Hydraulics, 250 HXI 700		
1	081-0039	REPLACE ITEM 2	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
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REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE:10 OF 14	REV 1	



					TITLE: Kit, Aux Hydraulics, 250 HXI 700	
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0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED:	APPROVED:	
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100047	PAGE:11 OF 14	REV 1



					TITLE: Kit, Aux Hydraulics, 250 HXI 700		
1	081-0039	REPLACE ITEM 2	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED:	APPROVED:	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1100047	PAGE:12 OF14	REV 1

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100024	MANIFOLD ASSEMBLY 250HXI700
2	1	810521	MOUNT, 12 STATION MANIFOLD, 250HXI700
3	1	2603	BREATHER,AIR,1/2"MNPT
4	1	1100105	GUARD, HOSE, GEARBOX, 250HXI700
5	8	5965	SCREW, CAP, HEX HD, 3/8" -16UNC x 3/4" DR HD
6	10	5967	SCREW,CAP,HEX HD,1/2"-13UNCx1-1/4",GR8,PLD,DR HD
7	15	7135	WASHER,LOCK,HELICAL SPRING,3/8",ALLOY,PLD
8	10	5881	WASHER, LOCK, HELICAL SPRING, 1/2", ALLOY PLD
9	1	1100094	ASSEMBLY,GRABBER LIFT MANIFOLD,EXI/HXI
10	1	1090073	MANIFOLD, MINI BOOSTER, HC3
11	7	960054	SCREW,CAP,HEX HD,3/8"-16UNCx4-1/2",GR8,PLD DR HD
12	1	1100119	GUARD, ACCUMULATOR, GRABBER, EXI/HXI
13	1	1100120	GUARD, INTENSIFIER, GRABBER, EXI/HXI
14	4	1079	WASHER,LOCK,HELICAL SPRING,HI-COLLAR,1/2",BLACK
15	4	3727	SCREW,CAP,SKT HD,1/2"-13UNCx1-1/4",DR HD
16	4	3690	WASHER,LOCK,HELICAL SPRING,HI-COLLAR,3/8",BLACK
17	4	8763	SCREW,CAP,SKT HD,3/8"-16UNCx1",DR HD
18	1	720222	GAUGE,LIQ FILLED,0-7500PSI/KPA,2.5"ODX1/4"MNPT,LM
19	1	7353	GAUGE, LIQ FILLED, 0-3000PSI/KPA, 2.5"ODX1/4"MNPT, CBM
20	1	0387	PLUG, QUICK DISCONNECT, COUPLER, 78-SER, 1"
21	1	0389	CAP, QUICK DISCONNECT, NIPPLE, 78-SER, 1"
22	6	0022	VALVE,CONTROL,1/4"NPT,C/W REV FLOW FREE CHECK
23	2	0411	DISCONNECT,QUICK,COUPLER,74SERIES,3/8"X3/8"FNPT
24	2	3461	CAP, QUICK DISCONNECT, COUPLER, 74-SER, 3/8"
25	2	0418	QUICK DISCONNECT, NIPPLE, 3/8"X3/8"FNPT, 74 SERIES
26	2	3460	CAP, QUICK DISCONNECT, NIPPLE, 74-SER, 3/8"
27	1	2895	DISCONNECT,QUICK,COUPLER,78SERIES,1"X1"FNPT
28	1	2008	DISCONNECT, QUICK, NIPPLE, 78 SERIES, 1"X1"FNPT
29	1	0029	VALVE,CHECK,INLINE,1/2"FNPT,3000-PSI WP,5-PSI CP
30	1	2021	BODY,CARTRIDGE,RELIEF,2 WAY,#8 SAE
31	1	16245	VALVE,RELIEF,100-250 PSI,VENT/ ATMOSPHERE
32	10 FT	15473	SLEEVE,HOSE,NYLON,1.53"ID,BULK
101	2	0236	FITTING,HYD,STR,#16MNPTX#16MNPT
102	2	0239	FITTING,HYD,STR,#6MNPTX#4MNPT
103	11	0199	FITTING, HYD, 90°ELB, #6MJICX#6MORB
104	1	2788	FITTING,HYD,90°ELB,#6MJICX#8MORB
105	1	12128	FITTING,HYD,TEE,#6MJICX#6MJICX#6MORB-BR
106	2	0337	FITTING,HYD,STR,#6FJICX#4MJIC
107	7	0352	FITTING,HYD,90°ELB,#6MJICX#6FJIC
108	2	0373	FITTING,HYD,TEE,#6MJICX#6MJICX#6FJIC-BR
109	12	1497	FITTING,HYD,STR,#6MJICX#6MORB
110	1	0327	FITTING,HYD,STR,#4FNPTX#6FJIC
111	1	12303	FITTING,HYD,90°ELB,#8MJICX#6MORB
112	1	10513	FITTING,HYD,STR,#8MJICX#8FNPT
113	2	0292	FITTING,HYD,STR,#6MJICX#6MNPT
114	9	12291	FITTING,HYD,45°ELB,#6MJICX#6MORB
115	1	0349	FITTING,HYD,45°ELB,#6MJICX#6FJIC
116	6	0289	FITTING,HYD,STR,#6MJICX#4MNPT
117	4	0214	FITTING,HYD,STR,#4MNPTX#6FJIC
118	4	0316	FITTING,HYD,90°ELB,#6MJICX#6MNPT
119	2	0318	FITTING,HYD,90°ELB,#8MJICX#8MNPT
120	1	0235	FITTING,HYD,STR,#8MNPTX#8MNPT
121	1	0213	FITTING,HYD,STR,#8MNPTX#8FJIC
122	1	0361	FITTING,HYD,TEE,#8FNPTX#8FNPTX#8FNPT

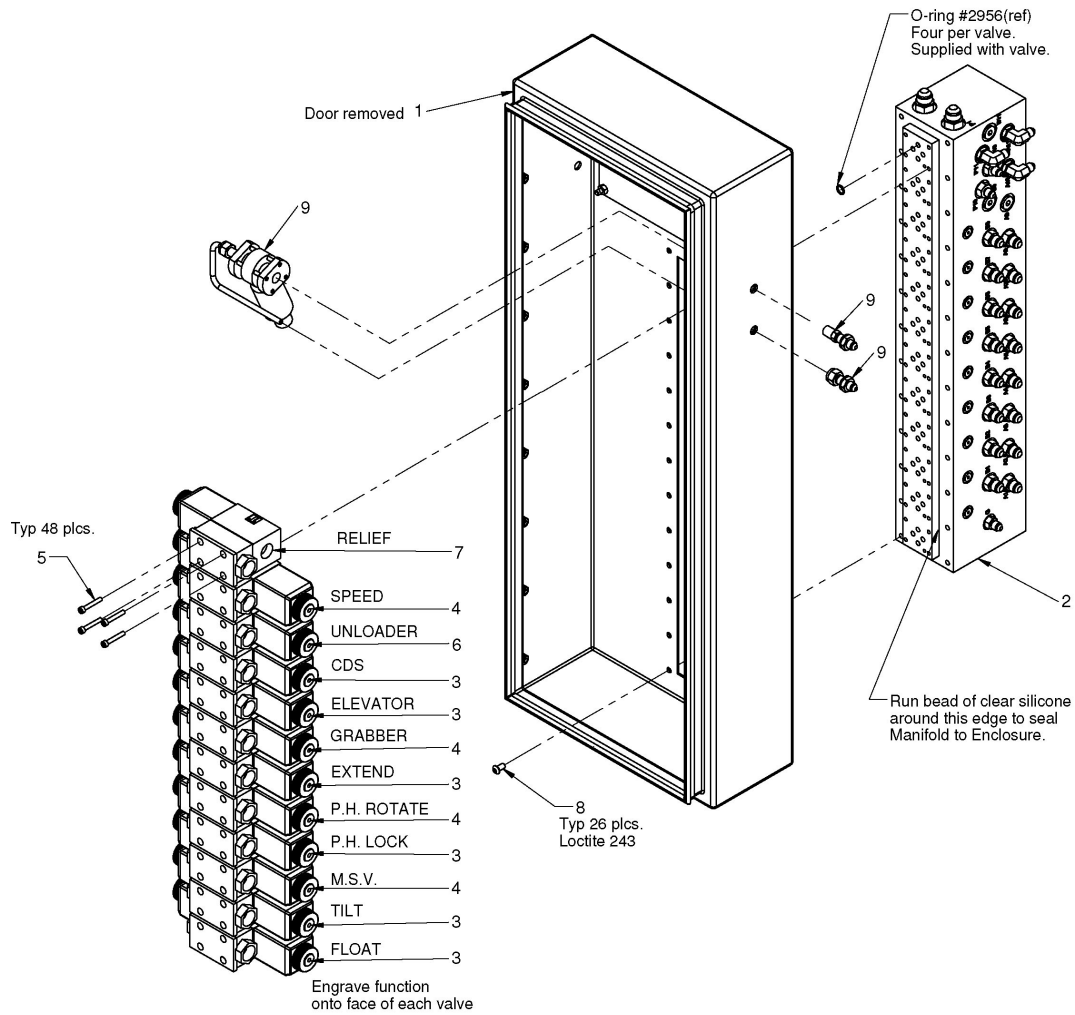
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1	081-0039	REPLACE ITEM 2	16JUL2007	DRAFTED: DenisG		DATE: 08MAY2007			
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED:		APPROVED:			
REV	ECN	DESCRIPTION	DATE	DWG No: 1100047		PAGE:13 OF 14		REV 1	




ITEM NO.	QTY.	PART NO.	DESCRIPTION
123	2	0283	FITTING,HYD,STR,#8MJICx#8MNPT
124	2	0369	FITTING,HYD,TEE,#8MJICx#8MJICx#8MJIC
125	1	0339	FITTING,HYD,STR,#8FJICx#6MJIC
126	3	1491	FITTING,HYD,STR,#4MJICx#6MORB
127	2	0353	FITTING,HYD,90°ELB,#4MJICx#4FJIC
128	1	12289	FITTING,HYD,45°ELB,#4MJICx#6MORB
129	3	0323	FITTING,HYD,90°ELB,#4MJICx#4MNPT
130	2	1507	FITTING,HYD,STR,#8MORBx#8FJIC
131	1	0354	FITTING,HYD,90°ELB,#8MJICx#8FJIC
201	1	1320201	HOSE,HYD,100R2-AT,#6X15",FJICXLONG 90°FJIC
202	1	1320202	HOSE,HYD,100R2-AT,#6X25",FJICXLONG 90°FJIC
203	1	1320081	HOSE,HYD,100R2-AT,#6X49",FJICXFJIC
204	1	1320204	HOSE,HYD,100R2-AT,#4X123",FJICXFJIC
205	1	1320084	HOSE,HYD,100R2-AT,#6X123",FJICXFJIC
206	1	1320079	HOSE,HYD,100R2-AT,#6X20",FJICX90°FJIC
207	2	1320093	HOSE,HYD,100R2-AT,#6X143FJICX90°FJIC
208	1	16726	HOSE,HYD,100R2-AT,#6X25",FJICX90°FJIC
209	1	1320088	HOSE,HYD,100R2-AT,#6X23",FJICX90°FJIC
210	2	1320090	HOSE,HYD,100R2-AT,#6X73",FJICX90°FJIC
211	1	1320211	HOSE,HYD,100R2-AT,#6X72",FJICX90°FJIC
212	1	3419	HOSE,HYD,100R2-AT,#6X56",FJICXFJIC
213	1	1320213	HOSE,HYD,100R2-AT,#6X58",FJICX90°FJIC
214	1	5465	HOSE,HYD,100R2-AT,#6X65",FJICXFJIC
215	1	1320215	HOSE,HYD,100R2-AT,#6X22",FJICX90°FJIC
216	1	1320216	HOSE,HYD,100R2-AT,#6X21",FJICXLONG 90°FJIC
217	1	17329	HOSE,HYD,100R2-AT,#6X18",FJICX90°FJIC
218	1	1320218	HOSE,HYD,100R2-AT,#6X22.5",FJICXLONG 90°FJIC
219	1	1320219	HOSE,HYD,100R2-AT,#4X52",FJICX90°FJIC
220	1	1320220	HOSE,HYD,100R2-AT,#4X49",FJICX90°FJIC
221	1	1320221	HOSE,HYD,100R2-AT,#6X36.5",FJICX90°FJIC
222	1	1320222	HOSE,HYD,100R2-AT,#6X36.5",FJICXLONG 90°FJIC
223	1	1320223	HOSE,HYD,100R2-AT,#6X44",FJICXLONG 90°FJIC
224	1	1320224	HOSE,HYD,100R2-AT,#6X44",FJICX90°FJIC
225	1	17321	HOSE,HYD,100R2-AT,#6X21",FJICX90°FJIC
226	1	1320226	HOSE,HYD,100R2-AT,#6X23.5",FJICXLONG 90°FJIC
227	1	1320227	HOSE,HYD,100R2-AT,#6X31",FJICX90°FJIC
228	1	1320228	HOSE,HYD,100R2-AT,#6X29.5",FJICXLONG 90°FJIC
229	1	1320229	HOSE,HYD,100R2-AT,#6X36",FJICX90°FJIC
230	1	1320230	HOSE,HYD,100R2-AT,#6X40",FJICXLONG90°FJIC
231	1	3406	HOSE,HYD,100R2-AT,#6X24",FJICXFJIC
232	1	1320232	HOSE,HYD,100R2-AT,#8X43",FJICX90°FJIC
233	1	731242	HOSE,HYD,100R2-AT,#8X13",FJICXFJIC
234	1	1320234	HOSE,HYD,100R2-AT,#8X33.5",FJICXFJIC
235	1	3490	HOSE,HYD,100R2-AT,#8X32",FJICXFJIC
236	1	3464	HOSE,HYD,100R2-AT,#6X25",FJICXFJIC
237	2	5440	HOSE,HYD,100R2-AT,#6X32",FJICXFJIC
238	1	1320239	HOSE,HYD,100R2-AT,#4X40.5",FJICXLONG 90°FJIC
239	1	1320240	HOSE,HYD,100R2-AT,#4X41.5",FJICXLONG 90°FJIC
240	1	1320241	HOSE,HYD,100R2-AT,#4X40.5",FJICX90°FJIC
241	1	1320242	HOSE,HYD,100R2-AT,#4X48",FJICX90°FJIC
242	1	1320243	HOSE,HYD,100R2-AT,#4X44.5",FJICX90°FJIC
243	1	3564	HOSE,HYD,100R2-AT,#8X9",FJICXFJIC

					TITLE: Kit, Aux Hydraulics, 250 HXI 700		
1	081-0039	REPLACE ITEM 2	16JUL2007		DRAFTED: DenisG	DATE: 08MAY2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED:	APPROVED:	
REV	ECN	DESCRIPTION	DATE		DWG No: 1100047	PAGE:14 OF 14	REV 1

MANIFOLD ASSEMBLY, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	770763	ENCLOSURE, AUX MANIFOLD, 250HXI700
2	1	1320065	MANIFOLD, 12 STATION, 250HXI700
3	6	16270	VALVE,DIR CNTRL,ELEC OPER,3P,4W,D03,5000PSI
4	4	16268	VALVE,DIR CNTRL,ELEC OPER,3P,4W,D03,5000PSI
5	48	1038	SCREW,CAP,SKT HD,#10-24UNCx1-1/4"
6	1	16267	VALVE,DIR CNTRL,ELEC OPER,3P,4W,D03,5000PSI
7	1	16269	VALVE,DIR CNTRL,ELEC OPER,2P,4W,D03,5000PSI
8	26	13696	SCREW, CAP, BUT HD,1/4"-20UNC X 1/2"
9	1	1310001	KIT, TRANSDUCER 250 HXI 700

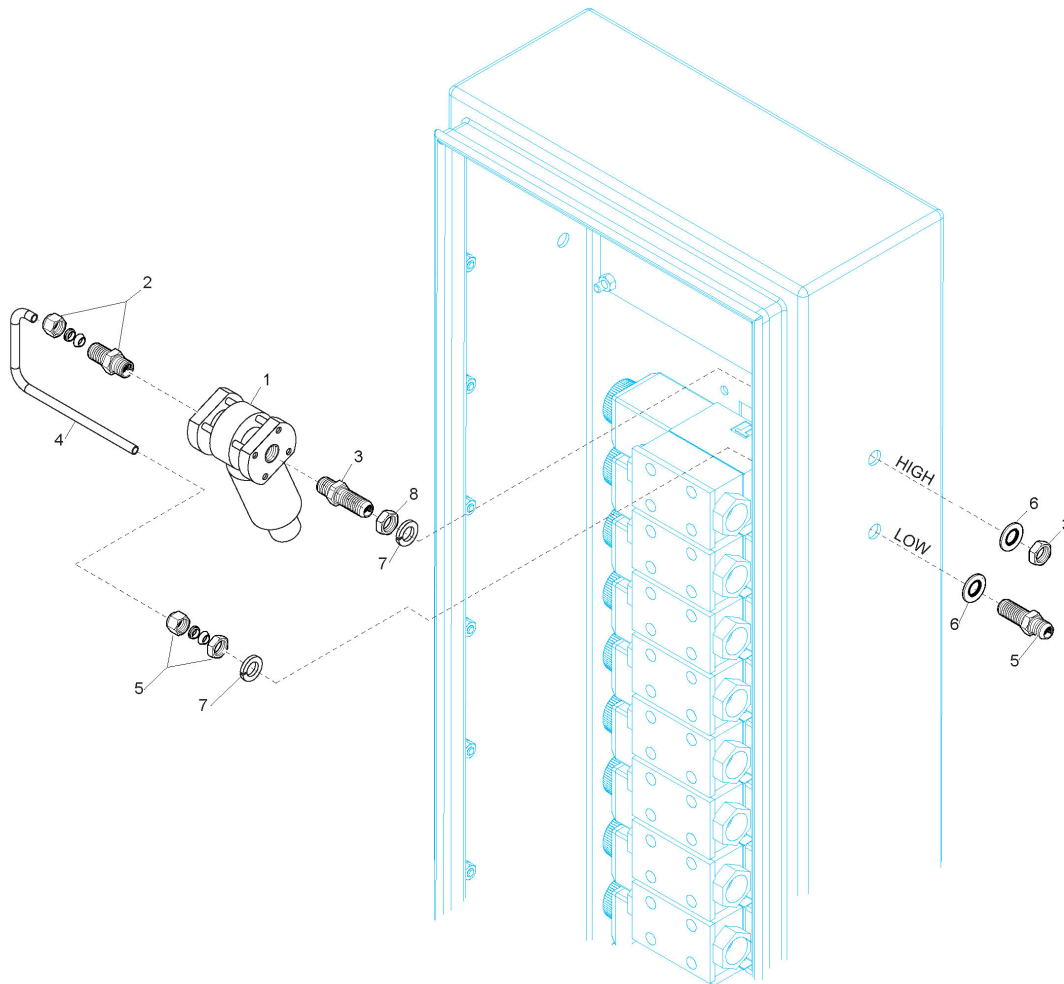





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0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100024	PAGE: 1 OF 1	REV: 0	

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KIT, TRANSDUCER, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	3879	TRANSDUCER,DFP, 4-20MA, 05000#,GP50
2	1	14134	FITTING,TUBE,STR,#4TUBEx#4MNPT,SS
3	1	12019	FITTING,HYD,STR,#4MNPTx#4MJIC-BLKHD
4	1	3876	TUBE,HYD,0.250"ODx0.065"WALL,SS
5	1	1985	FITTING,TUBE,STR,#4TUBEx#4MJIC-BLKHD,SS
6	2	0665	SEAL,STAT-O,BONDED,7/16"
7	2	10633	WASHER,LOCK,HELICAL SPRING,7/16",ALLOY,PLD
8	1	0966	NUT,HEX,7/16"-14UNC,GR8,PLD

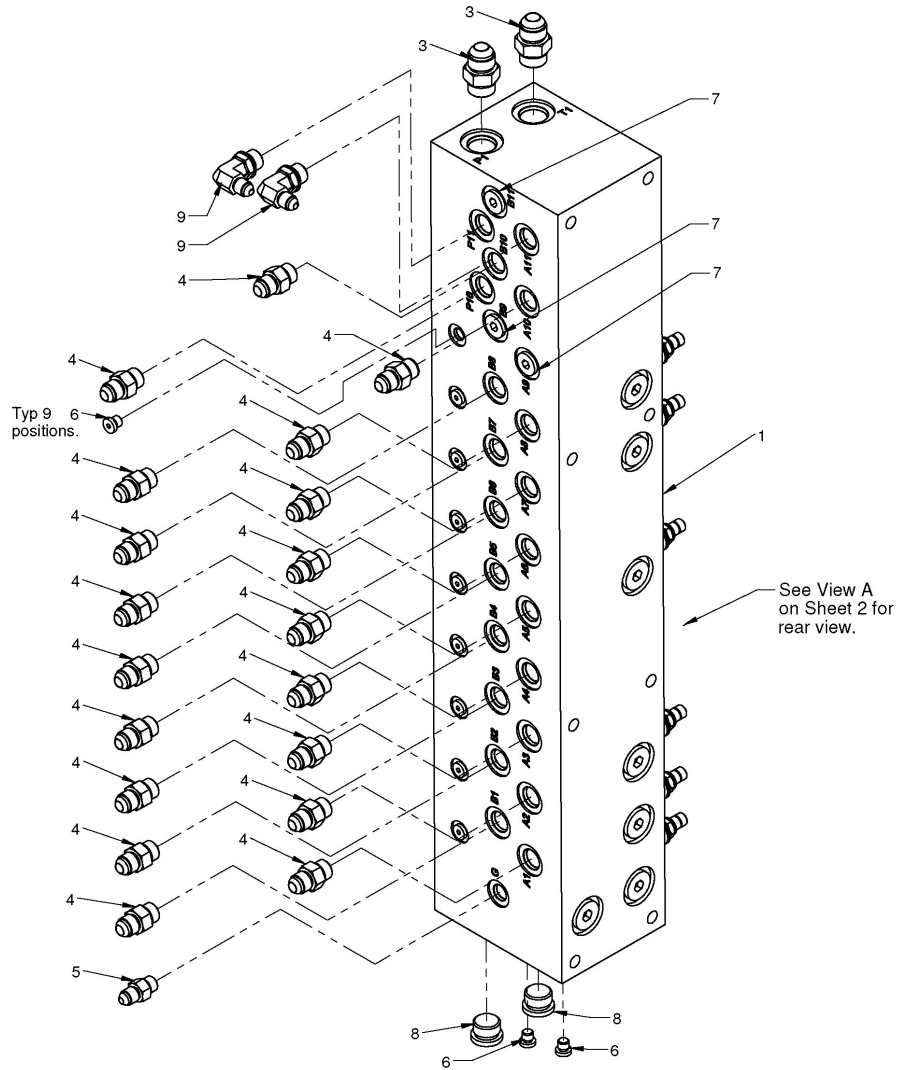





					TITLE: Kit, Transducer, 250 HXI 700	
					DRAFTED: DenisG	DATE: 30MAY2007
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 	
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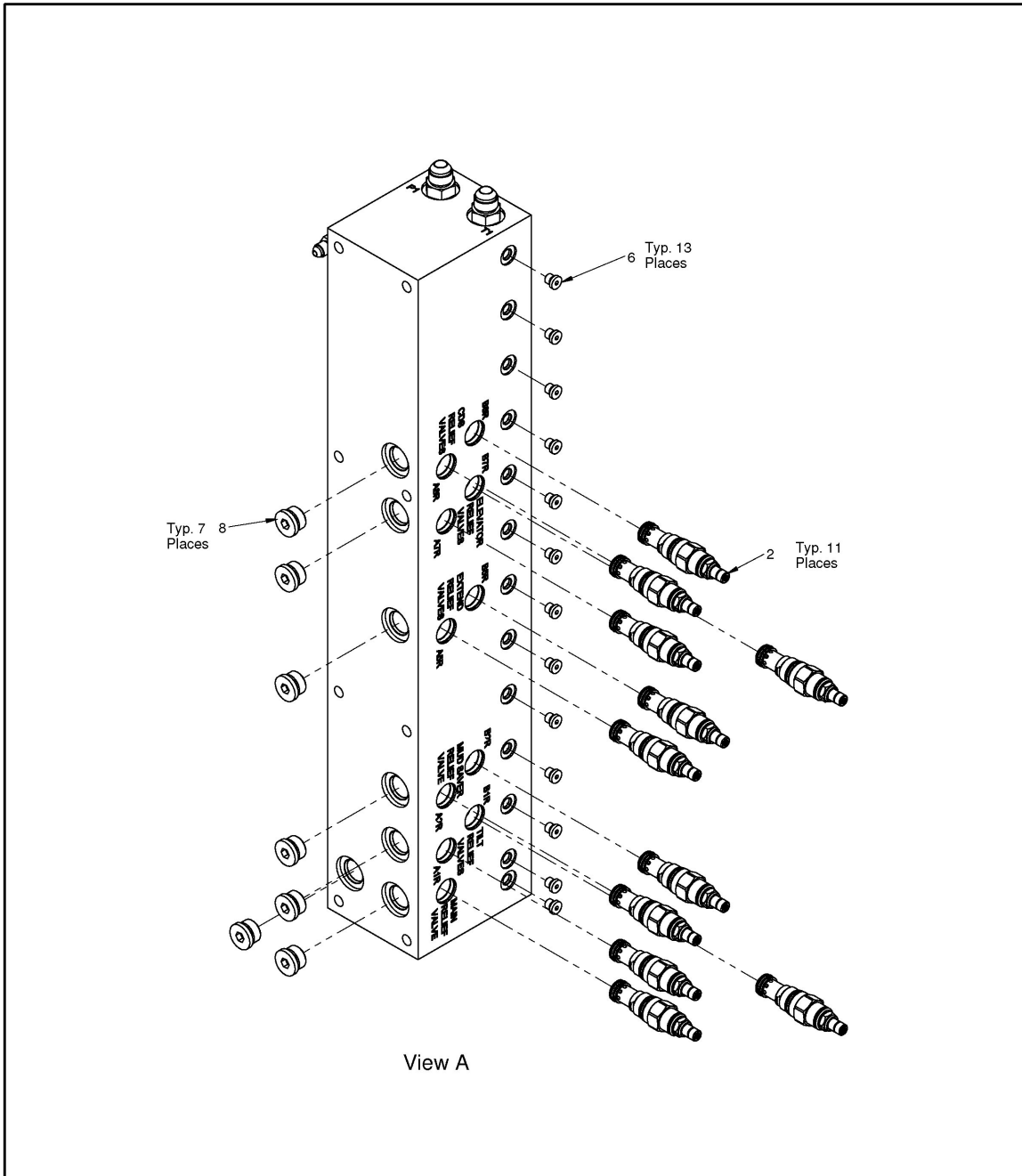
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MANIFOLD 12 STATION, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	590222	MANIFOLD, 12 STATION, ROBOTICS, TOP DRIVE
2	11	590047	VALVE, RELIEF, 25 GPM, 100-3000 PSI, CARTRIDGE, SUN
3	2	1502	FITTING, HYD, STR, #8MJICx#8MORB
4	19	1497	FITTING, HYD, STR, #6MJICx#6MORB
5	1	1488	FITTING, HYD, STR, #4MJICx#4MORB
6	24	4261	FITTING, HYD, PLUG, HEX SKT, #2 MORB
7	3	5128	FITTING, HYD, PLUG, HEX SKT, #6 MORB
8	9	5127	FITTING, HYD, PLUG, HEX SKT, #8 MORB
9	2	0200	FITTING, HYD, 90°ELB, #4MJICx#6MORB



					TITLE: Manifold 12 Station 250 HXI 700		
					DRAFTED: DenisG	DATE: 31JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1320065	PAGE: 1 OF 2	REV: 0	

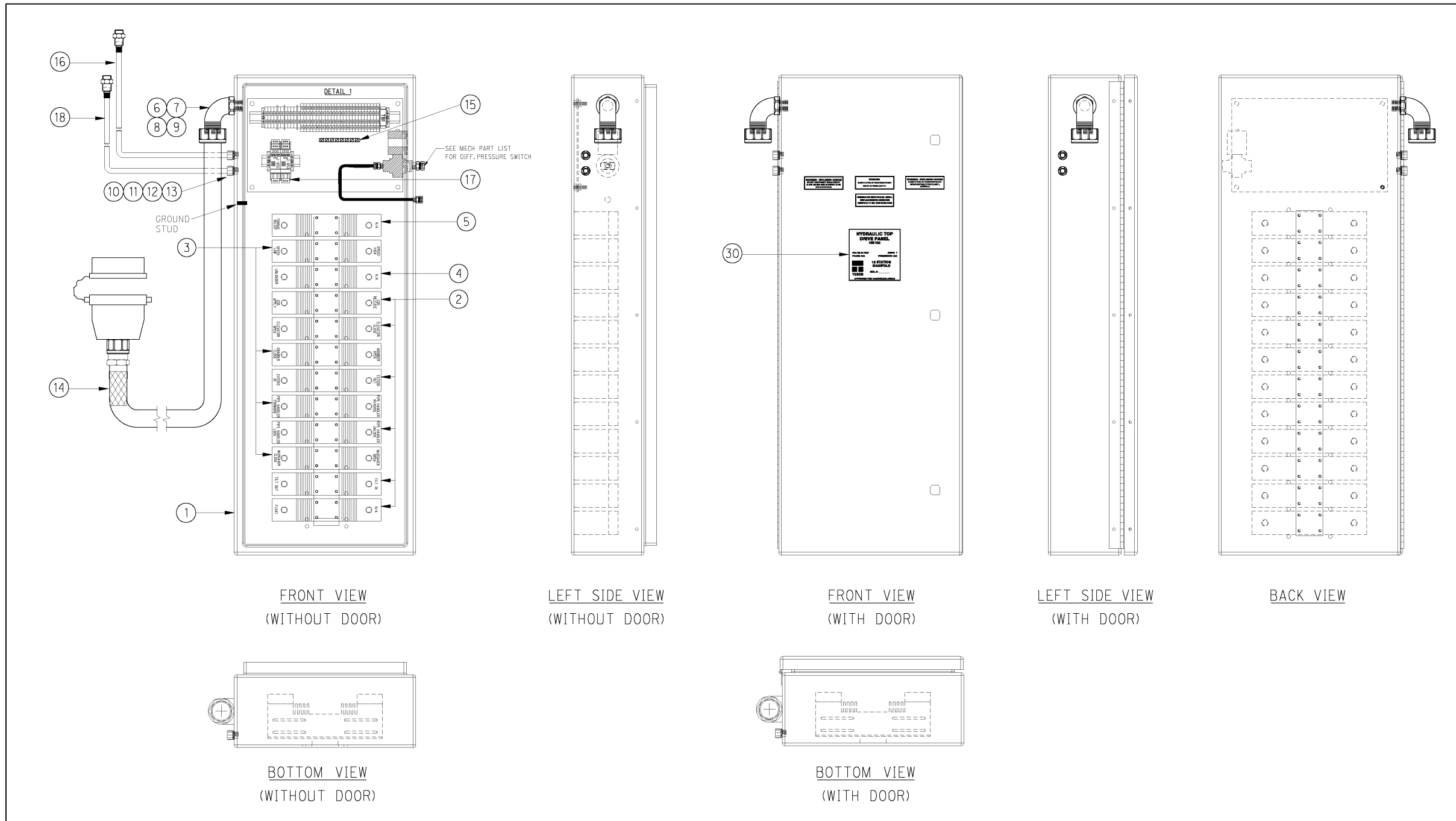


View A

					TITLE: Manifold 12 Station 250 HXI 700		
					DRAFTED: DenisG	DATE: 31JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007		CHECKED: 	APPROVED: 	
REV	ECN	DESCRIPTION	DATE		DWG NO: 1320065	PAGE: 2 OF 2	REV: 0

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PANEL ASSEMBLY, ELECTRICAL, 12-STATION MANIFOLD, 250-HXI-700

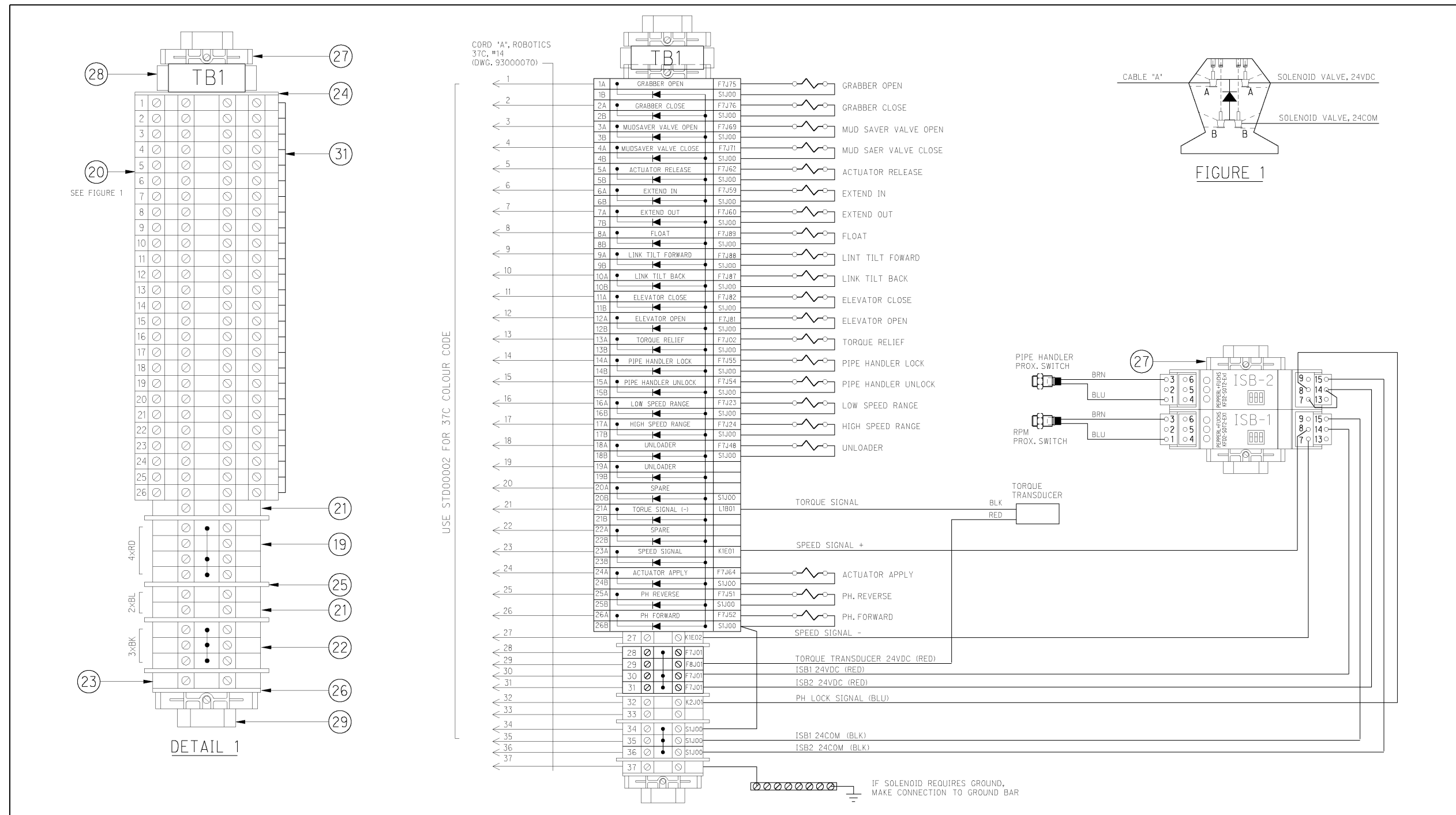


ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
10	2	0845	IBERVILLE	BUSHING, ELEC, 1/2", PLASTIC	20	26	2093	WIELAND	BLOCK, TERMINAL, DBL, 300V, 10A, GRY, c/w 3A DIODE
9	1	3958	T&B	RING, SEALING, ELEC, 1 1/4 "	19	4	3966	WIELAND	BLOCK, TERMINAL, WK 4/U, 600V, 40A, RED
8	1	3962	T&B	BUSHING, ELEC, 1 1/4", PLASTIC	18	1	6060	P&F	SWITCH, PROX, NAMUR, 2 WIRE, 5MM
7	1	3959	IBERVILLE	NUT, LOCK, ELEC, 1 1/4", STL	17	2	770184	P&F	BARRIERS F/ PH AND RPM SWITCHES
6	1	4095	T&B	CONNECTOR, 1/4", CABLE, 9D ELB, SR (1.065"-1.205")	16	1	770775	P&F	SWITCH, PROX, NAMUR, 2 WIRE, 1.5MM, HI PRESS.
5	1-REF	16269	VICKERS	VALVE,DIRECTIONAL,D03,24V,4W/2P	15	1	14768	WIELAND	GROUND BAR, 6" LONG
4	1-REF	16267	VICKERS	VALVE,DIRECTIONAL,D03,24V,4W/3P,P TO T	14	1	770695		CORD A, PIGTAIL, ROBOTICS, TOP DRIVE, ZONE 2
3	4-REF	16268	VICKERS	VALVE,DIRECTIONAL,D03,24V,4W/3P,A-B TO T	13	2	2123	T&B	RING, SEALING, ELEC, 1/2 "
2	6-REF	16270	VICKERS	VALVE,DIRECTIONAL,D03,24V,4W/3P,P-T-A-B BLK	12	2	3785	IBERVILLE	NUT, LOCK, ELEC, 1/2", STL
1	1	770682	ACE MFG.	ENCLOSURE, AUX. HYDRAULIC MANIFOLD BOX, HXI700	11	2	2125	T&B	CONNECTOR, CABLE, STR, 1/2", SR (0.310-0.560")

0 LC 07/05/2014-0038 ISSUED FOR MANUFACTURE
 1 SFH07/06/2019-0009 CHANGE QTY IN BOM & CORRECT THE ITEM DESC
 REV. BY: JY/AM/2019

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DRAWN	LC	PROJECT	GENERIC	STANDARD TOLERANCES:	
MODEL	HXI700	XX.XX/X-----	± 1/16		
D. CHK.		XX.XX-----	± 0.03		
E. CHK.		XX.XXX-----	± 0.01		
TITLE				XX.XXX-----	± 0.005
TESCO PART No. 770763				ANGLE-----	± 0.5°
UNITS	INCHES	SHEET	10F2	SCALE	1:4
FILE NAME	91000924.be1		REV.	1	



ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
30	1	770701		TAG SET	40				
29	1	3967	WIELAND	RAIL, MNT, DIN, TS 35x7.5x2M LONG, SLOT	39				
28	1	14779	WIELAND	LABEL CARRIER	38				
27	5	0823	WIELAND	CLAMP, END, WHT, F/RAIL, TS 35	37				
26	1	4051	WIELAND	PLATE, END, GRY, F/TERMINAL, WK 4/U	36				
25	4	0825	WIELAND	PLATE, PARTITION, GRY, F/TERMINAL, WK 4/U	35				
24	1	3969	WIELAND	PLATE, END, GRY, F/TERMINAL, WK 4 E/U	34				
23	1	10647	WIELAND	BLOCK, TERMINAL, WK 4/U, 600V, 40A, GREEN	33				
22	3	0820	WIELAND	BLOCK, TERMINAL, WK 4/U, 600V, 40A, BLACK	32				
21	3	0824	WIELAND	BLOCK, TERMINAL, WK 4/U, 600V, 40A, BLUE	31	3	11412	WIELAND	JUMPER, COMBS, 10P, F/ DBL TERMINAL BLOCK

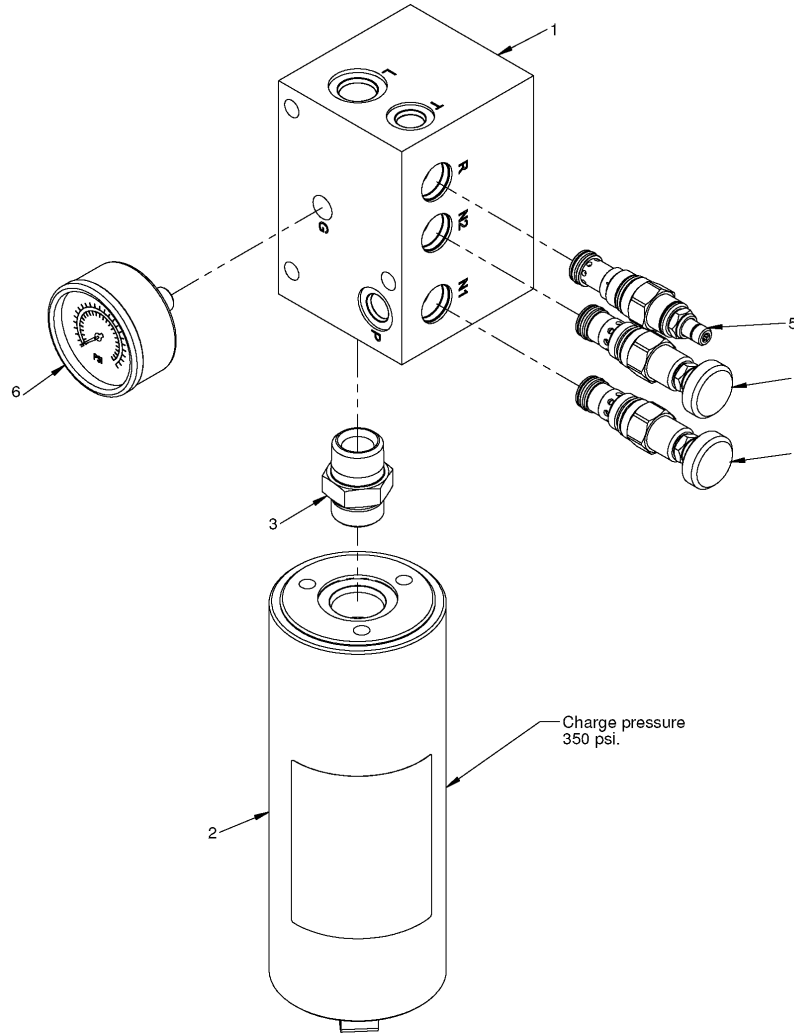
ITEM	QTY	PART NO.	MFR.	DESCRIPTION
28	1	F7J01		TORQUE TRANSDUCER 24VDC (RED)
29	1	F8J01		ISB1 24VDC (RED)
30	1	F7J01		ISB2 24VDC (RED)
31	1	F7J01		ISB2 24VDC (RED)
32	1	K2J01		PH LOCK SIGNAL (BLU)
34	1	S1J00		ISB1 24COM (BLK)
35	1	S1J00		ISB1 24COM (BLK)
36	1	S1J00		ISB2 24COM (BLK)
37	1			IF SOLENOID REQUIRES GROUND, MAKE CONNECTION TO GROUND BAR


DRAWN LC PROJECT GENERIC MODEL HX1700 D. CHK. E. CHK. APPD.	STANDARD TOLERANCES: XX, XX ¹ / ₂ ----- ± 1/16 XX.X ----- ± 0.03 XX.XX ----- ± 0.01 XX.XXX ----- ± 0.005 ANGLE ----- ± 0.5°	
TITLE AUX. MANIFOLD JUNCTION BOX, LAYOUT		
TESCO PART No. 770763	UNITS INCHES	SHEET 20F2
SCALE 1:4	FILE NAME 91000924.bel	REV. 1

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ASSEMBLY, GRABBER LIFT MANIFOLD, 250-HXI-700/350-EXI-600

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	590230	MANIFOLD, GRABBER LIFT, EXI / HXI
2	1	1100093	ACCUMULATOR, PISTON, 1PT, 3000-PSI, #12 FORB
3	1	0231	FITTING, HYD, STR, #12MORBx#12MNPT
4	2	1100092	VALVE, FLW CNTRL, CART, NDL, D03, T-13A, HANDKNOB
5	1	590047	VALVE, RELIEF, CARTRIDGE, PO, 100-3000 PSI, T-10A
6	1	7353	GAUGE, LIQ FILLED, 0-3000pPSI/kPA, 2.5"ODx1/4"MNPT, CBM

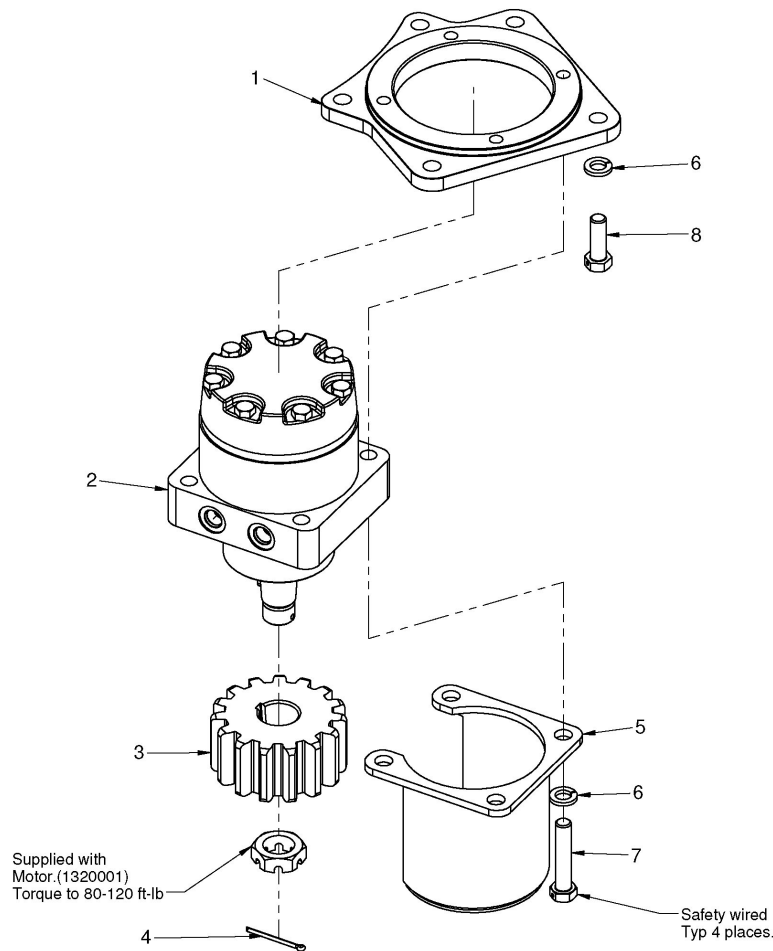





					TITLE: Assembly, Grabber Lift Manifold 350 EXI 600		
					DRAFTED: DenisG	DATE: 15 MAR2007	
				CHECKED: ? <i>AL</i>	APPROVED: ? <i>AL</i>		
0	84-0020	ISSUED FOR PRODUCTION	13APR2007	DWG NO: 1100094	PAGE: 1 OF 1	REV: 0	
REV	ECN	DESCRIPTION	DATE				

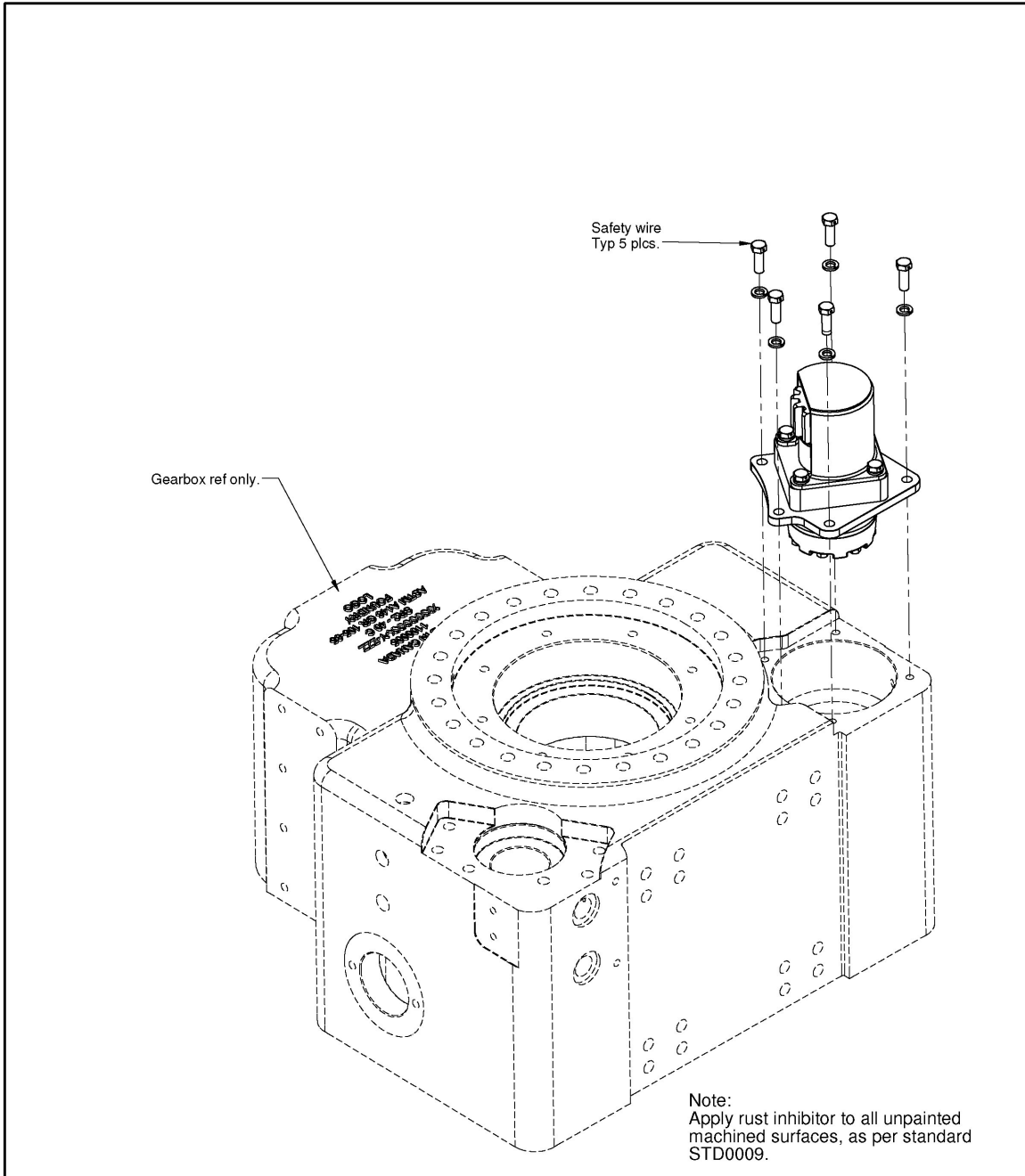
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KIT, MOTOR, ROTATE, PIPE HANDLER, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1100074	ADAPTER, MOTOR, PH ROTATE, 250HXI700
2	1	1320001	MOTOR, HYDRAULIC, 32.7 ci, WHITE CE 420540W3522AAAAA
3	1	820146	GEAR, PINION, ROTATE, PIPE HANDLER, EXI
4	1	15582	PIN, COTTER, 1/8"ODx2"LG, PLD
5	1	820147	GUARD, PINION, ROTATE, PIPEHANDLER, EXI
6	9	5881	WASHER, LOCK, HELICAL, SPRING, 1/2", ALLOY, PLD
7	4	6925	SCREW, CAP, HEX HD, 1/2" x 2 1/2", DR HD
8	5	3116	SCREW, CAP, HEX HD, 1/2"-13UNC x 1-1/2" LG, DR HD



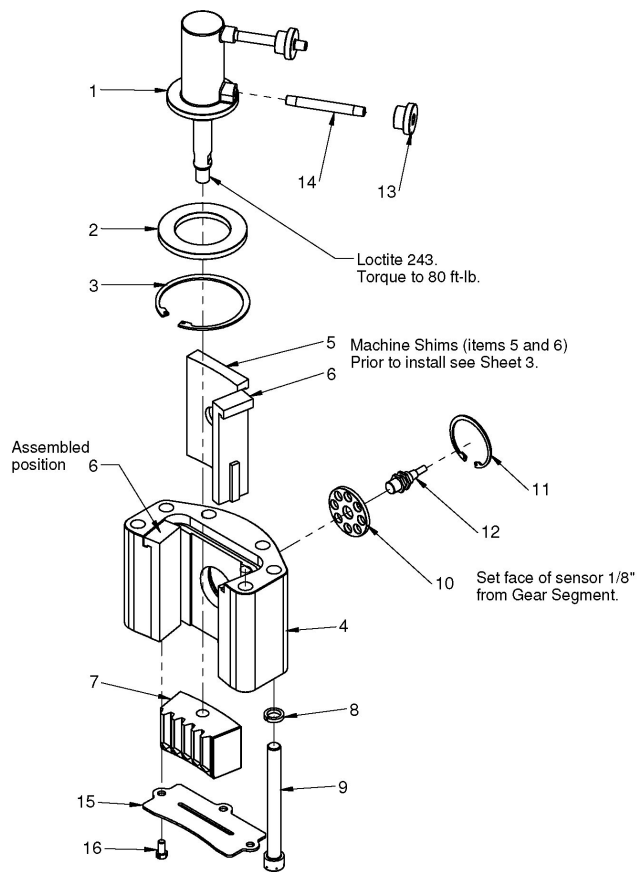
					TITLE: Kit, Motor, Rotate, Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 12APR2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100073	PAGE: 1 OF 2	REV: 0	






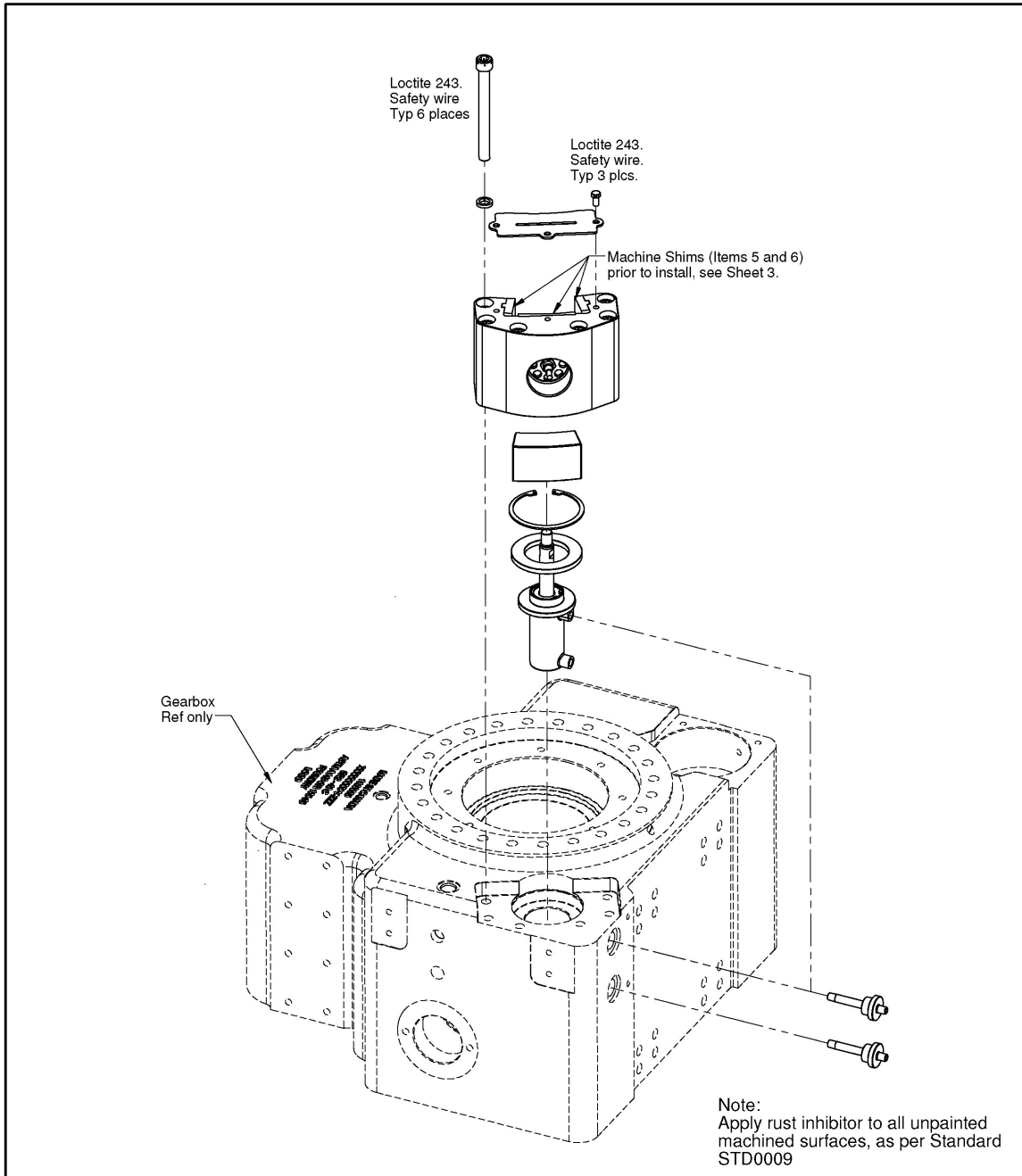
					TITLE: Kit, Motor, Rotate, Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 12APR2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100073	PAGE: 2 OF 2	REV: 0	

KIT, LOCK PIPE HANDLER, 250-HXI-700

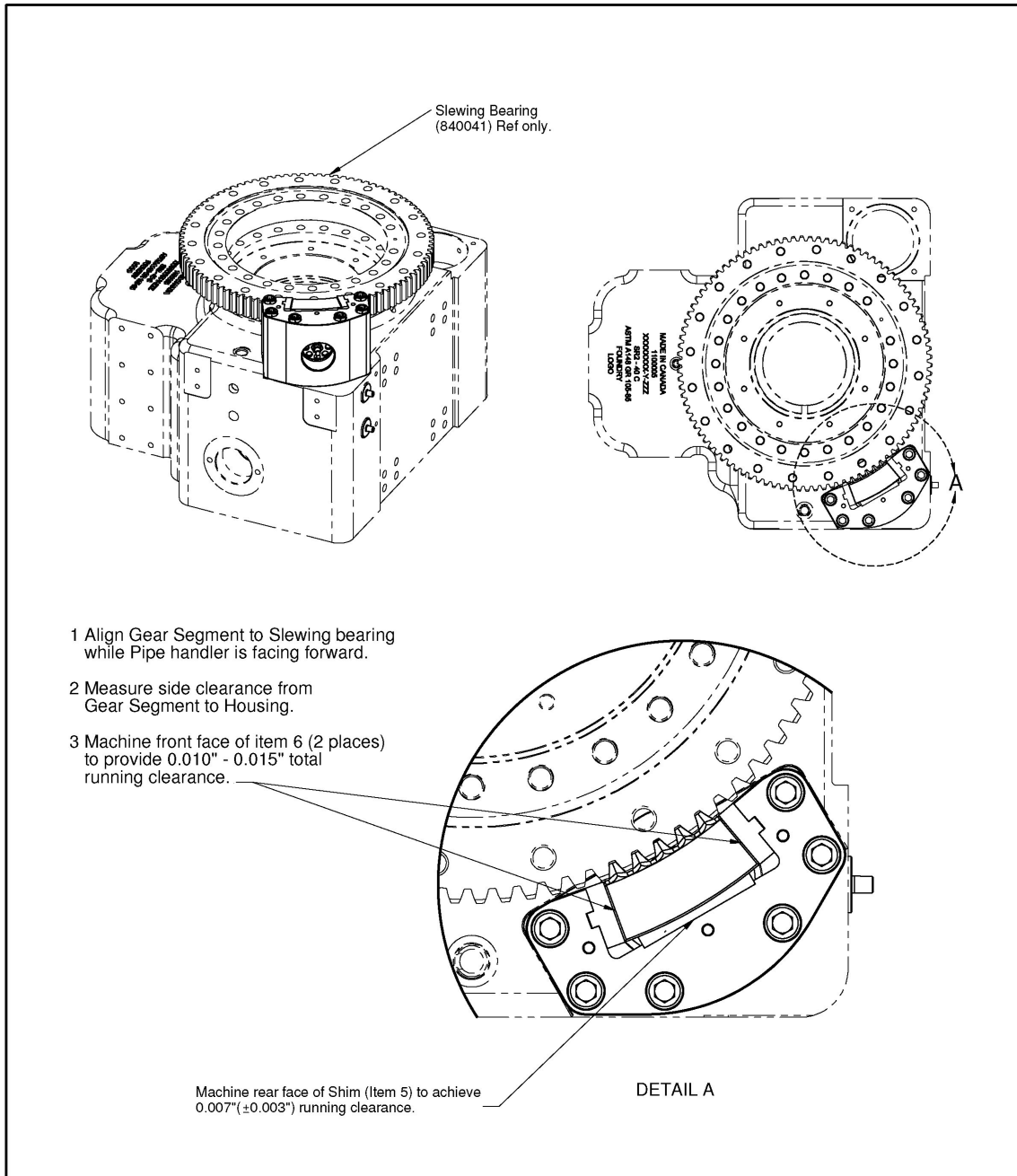
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1320014	CYLINDER, LOCK, P/H, EXI/HXI
2	1	810399	RETAINER, CYLINDER, PIPE HANDLER, EXI/HXI
3	1	1320015	RING, SNAP, INTERNAL, TRUARC N5000-500
4	1	1100076	BODY, LOCK, PIPE HANDLER, 250HXI700
5	1	1100077	SHIM, BACK, LOCK, PIPE HANDLER, 250HXI700
6	2	820145	SHIM, SIDE, LOCK, PIPE HANDLER, EXI/HXI
7	1	1100075	GEAR SEGMENT, LOCK PIPEHANDLER, HXI
8	6	3196	LOCKWASHER, HI COLLAR, 3/4"
9	6	970112	SCREW, CAP, SKT HD, 3/4"-10UNCx7-1/2", DR HD, 3 HOLE
10	1	1100117	RETAINER, PROXIMITY SENSOR, P/H LOCK, 350EXI600
11	1	1100116	RING, SNAP, INTERNAL, TRUARC N5000-300
12	1	6060	SWITCH, PROX, NAMUR, 18AWG, P&F
13	2	810429	BUSHING, PIPE, PORT EXT. CYL, LOCK, P/H, EXI/HXI
14	2	1100104	FITTING, PIPE, NIPPLE, SCH80, 1/4" MNPT x 4-1/2" Lg
15	1	1100122	GUARD, GEAR SEGMENT, P/H LOCK, 250HXI700
16	3	3533	SCREW, CAP, HEX HD, 3/8" -16UNC x 3/4" DR HD






					TITLE: Kit, Lock Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 11DEC2006	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100086	PAGE: 1 OF 3	REV: 0	



					TITLE: Kit, Lock Pipe Handler, 250 HXI 700		
					DRAFTED: DenisG	DATE: 11DEC2006	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100086	PAGE: 2 OF 3	REV: 0	

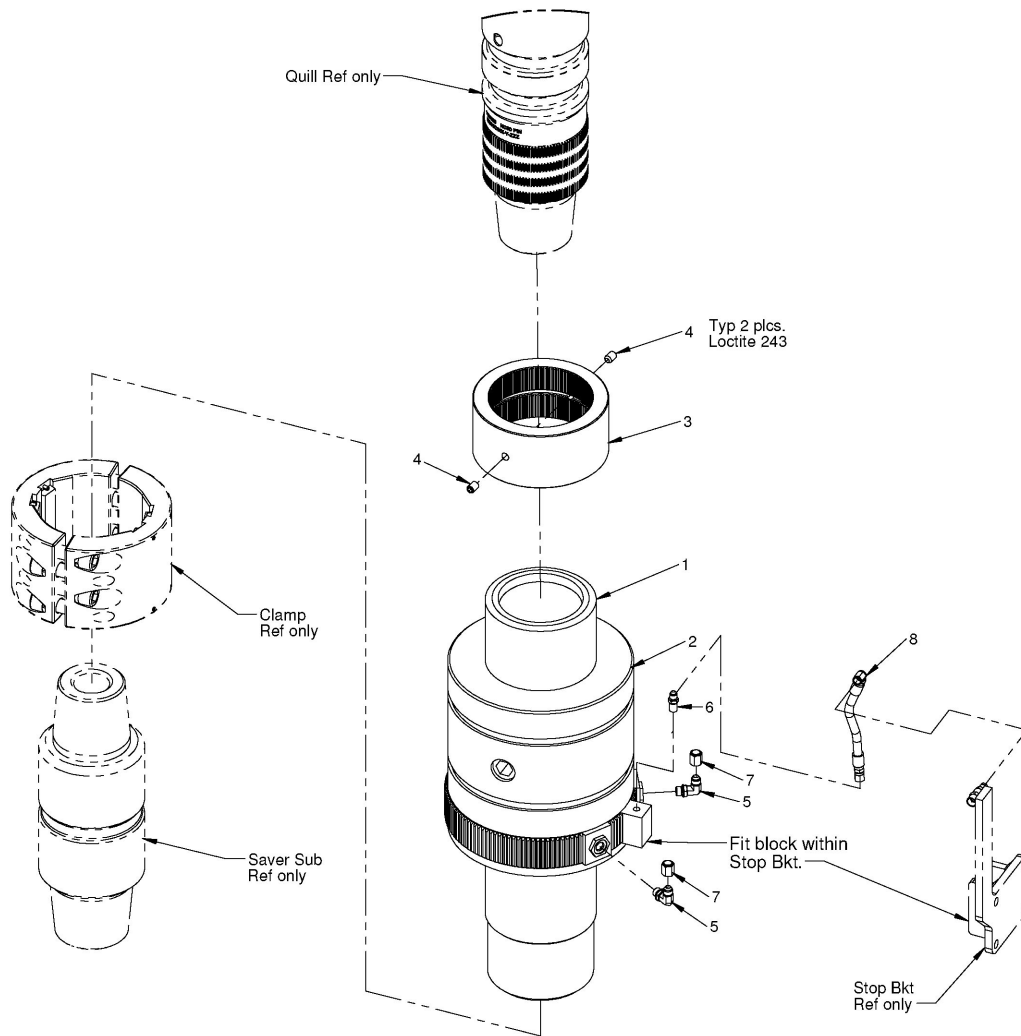


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					DRAFTED: DenisG	DATE: 11DEC2006	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	TESCO	DWG NO: 1100086	PAGE: 3 OF 3	REV: 0

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KIT, MUDDSAVER VALVE, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	720475	VALVE, MUDDSAVER, DUAL BALL, SPLINED LOCK, 4-1/2" IF, BXB
2	1	8528	ACTUATOR, MUDDSAVER VALVE, 4186-TDA-SER-C
3	1	11315	COLLAR, QUILL SPLINE LOCK
4	2	6188	Screw, Set, Skt Drive, Cup Pt, 1/2"-13UNCx3/4"
5	2	0199	FITTING, HYD, 90°ELB, #6MJICx#6MORB
6	1	0286	FITTING, HYD, STR, #4MJICx#2MNPT
7	2	0405	FITTING, HYD, CAP, #6 FJIC, STL
8	1	820183	HOSE, HYD, 100R2-AT, #4X9.5", FJICx90°FJIC

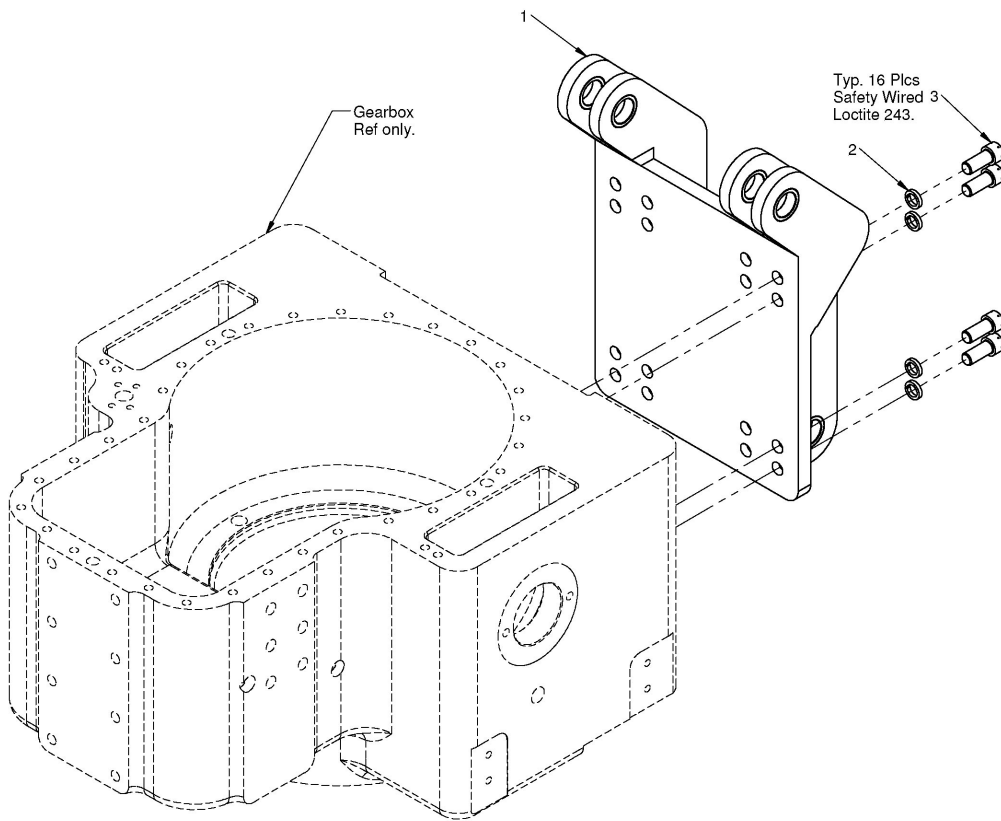


					TITLE: Kit, Mudsaver Valve, 250 HXI 700		
					DRAFTED: DenisG	DATE: 03JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: 	APPROVED: 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100091	PAGE: 1 OF 1	REV: 0	

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KIT, TORQUE ARREST, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	820114	MOUNT, EXTEND FRAME, MACHINED, EMI 400
2	16	3196	LOCKWASHER, HI COLLAR, 3/4"
3	16	14734	SCREW,CAP,SKT HD,3/4"-10UNCx1-3/4",DR HD,3 HOLE



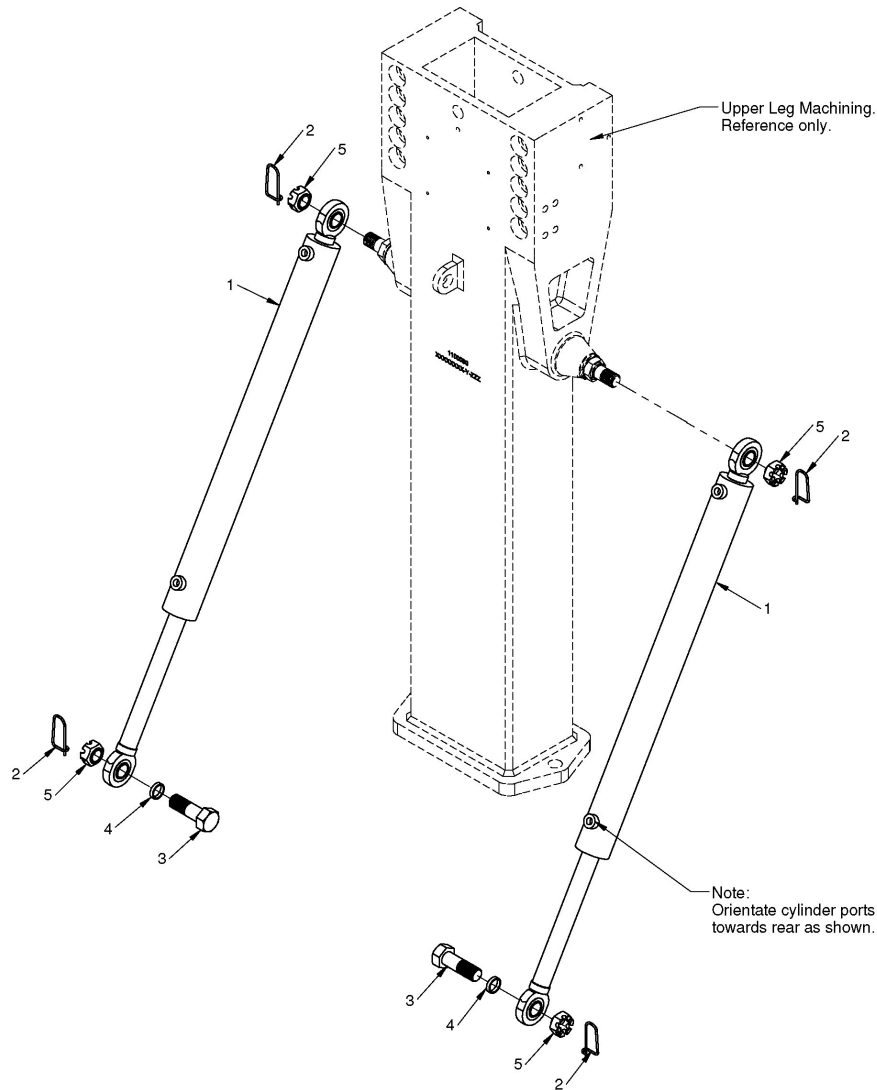
Note:
Apply rust inhibitor to all unpainted machined surfaces, as per Standard STD0009.

					TITLE: Kit,Torque Arrest 250 HXI 700		
					DRAFTED: DenisG	DATE: 26JAN2007	
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED: ? M4	APPROVED: ? 		
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100112	PAGE: 1 OF 1	REV: 0	

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KIT, LINK TILT, 250-HXI-700

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	15645	CYLINDER, HYD, SNGL STAGE, 2.5" BORE 1.3" ROD, 16" STROKE
2	4	2361	PIN, SAFETY, 1/8" WIRE OD x 3-1/8" USABLE LG
3	2	4022	SCREW, MODIFIED, ROD END, 1"- 8UNC x 3"
4	2	4023	SPACER, ROD END, 1.160" OD X 0.985" ID
5	4	4024	NUT, HEX, SLOTTED, 1"- 8UNC, GR2, MODIFIED



					TITLE: Kit, Link Tilt, 250 HXI 700		
					DRAFTED: DenisG DATE: 29JAN2007		
0	132-0005	ISSUED FOR PRODUCTION	25JUN2007	CHECKED:  Mf APPROVED: 			
REV	ECN	DESCRIPTION	DATE	DWG NO: 1100113 PAGE: 1 OF 1 REV: 0			

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CHAPTER 3: POWER UNIT

This chapter contains the parts lists and accompanying illustrations for the 250TON HXI 700HP top drive Power Unit.

POWER UNIT, HYD, STD AMB, 480 VAC 12V2000, HXI

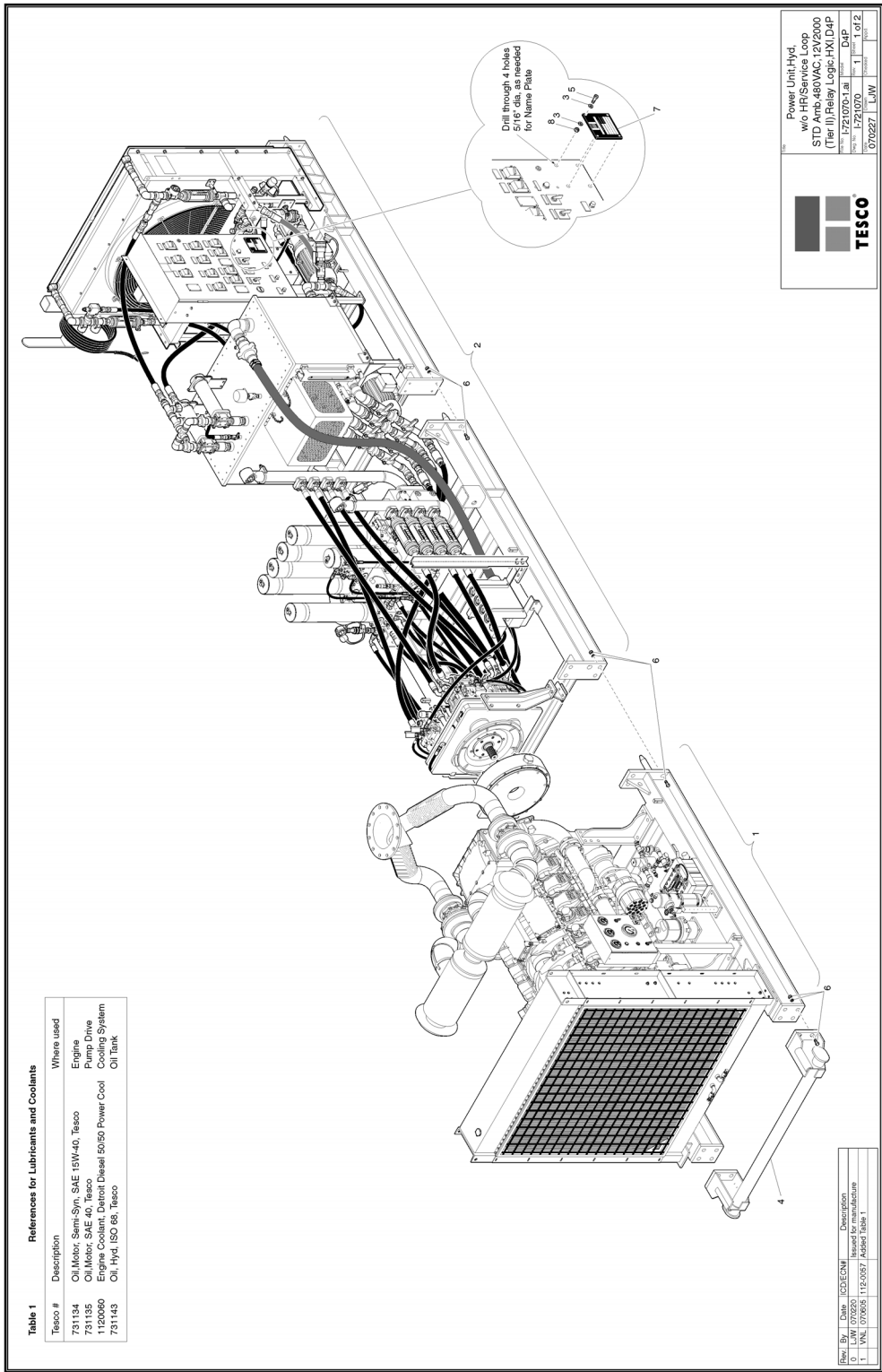


Table 1 References for Lubricants and Coolants

Tesco #	Description	Where used
731134	Oil Motor Semi-Syn. SAE 15W-40, Tesco	Engine
731135	Oil Motor SAE 40, Tesco	Pump Drive
1120060	Engine Coolant, Detroit Diesel 50/50 Power Cool	Cooling System
731143	Oil, Hyd. ISO 68, Tesco	Oil Tank

Power Unit-Hyd,
w/o H/R/Service Loop
STD Amb.480VAC-12V2000
(Tier II)Relay Logic-HXI,D4P

Rev: 1.2Z 1070-1.01
Date: 12/28/07
Dwg No: 12/28/07-1.01
DWG

Rev	By	Date	DC/DENM	Description
1	VNL	07/03/05	112/2057	Assembled Table 1

Parts List



Part # 721070

Drawing # I-721070

Rev. 1 Page 2 of 2

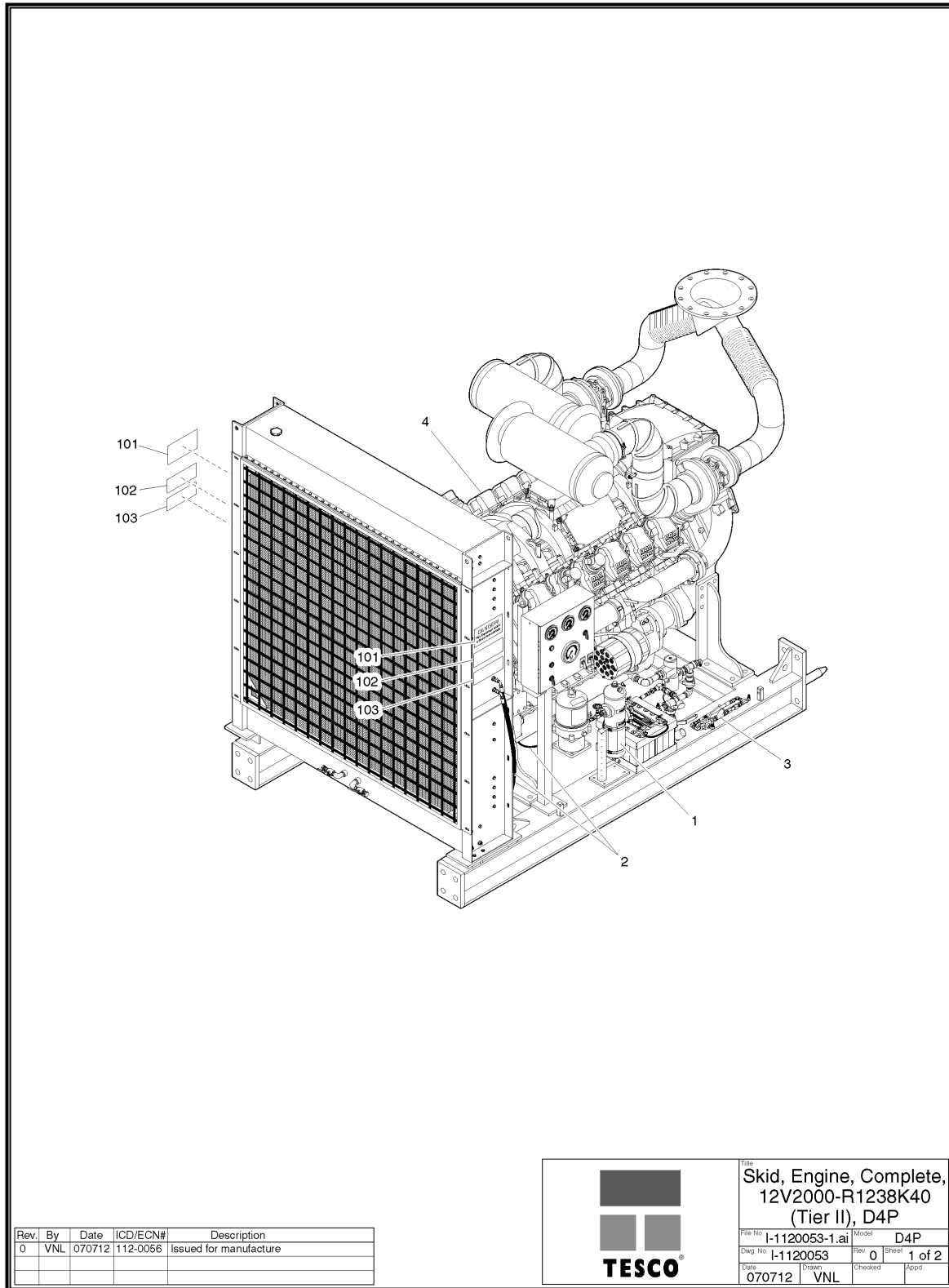
File # I-721070.xls

Refer: 1 Illustration


Drawing Title: Power Unit,Hyd,w/o HR/Service Loop, STD Amb,480VAC,12V2000 (Tier II),Relay Logic,HXI,D4P

Item #	Tesco #	Qty	Description
1	1120053	1	Skid,Engine,Complete,12V2000-R1238K40 (Tier II),D4P
2	1120080	1	Power Unit,w/o Eng Skid/Hose Reel/Service Loop,Relay Logic,HXI,D4P
3	11467	8	Washer,Flat,Type A,Narrow,1/4",Hardened,Pld
4	3229	1	Skid,Roll,D4P/D6P
5	3271	4	Screw,Cap,Skd Hd,1/4"-20UNCx1"
6	730669	1	Kit,Fasteners,Skid Set,D4P
7	8151	1	NAMEPLATE, TOP DRIVE, SIX LINES
8	9785	4	Nut,Hex,Lock,Nylon,1/4"-20UNC,Gr8,Pld

POWER UNIT, HYD, STD AMB, 480 VAC 12V2000, HXI



Rev.	By	Date	ICD/ECN#	Description
0	VNL	070712	112-0056	Issued for manufacture



Title			
Skid, Engine, Complete, 12V2000-R1238K40 (Tier II), D4P			
File No	I-1120053-1.a1	Model	D4P
Dwg No	I-1120053	Rev	0
Date	070712	Drawn	VNL
		Checked	
		Appd	
		Sheet	1 of 2

Parts List



Part # 1120053

Drawing # I-1120053

Rev. 0

Page 2 of 2

File # I-1120053.xls

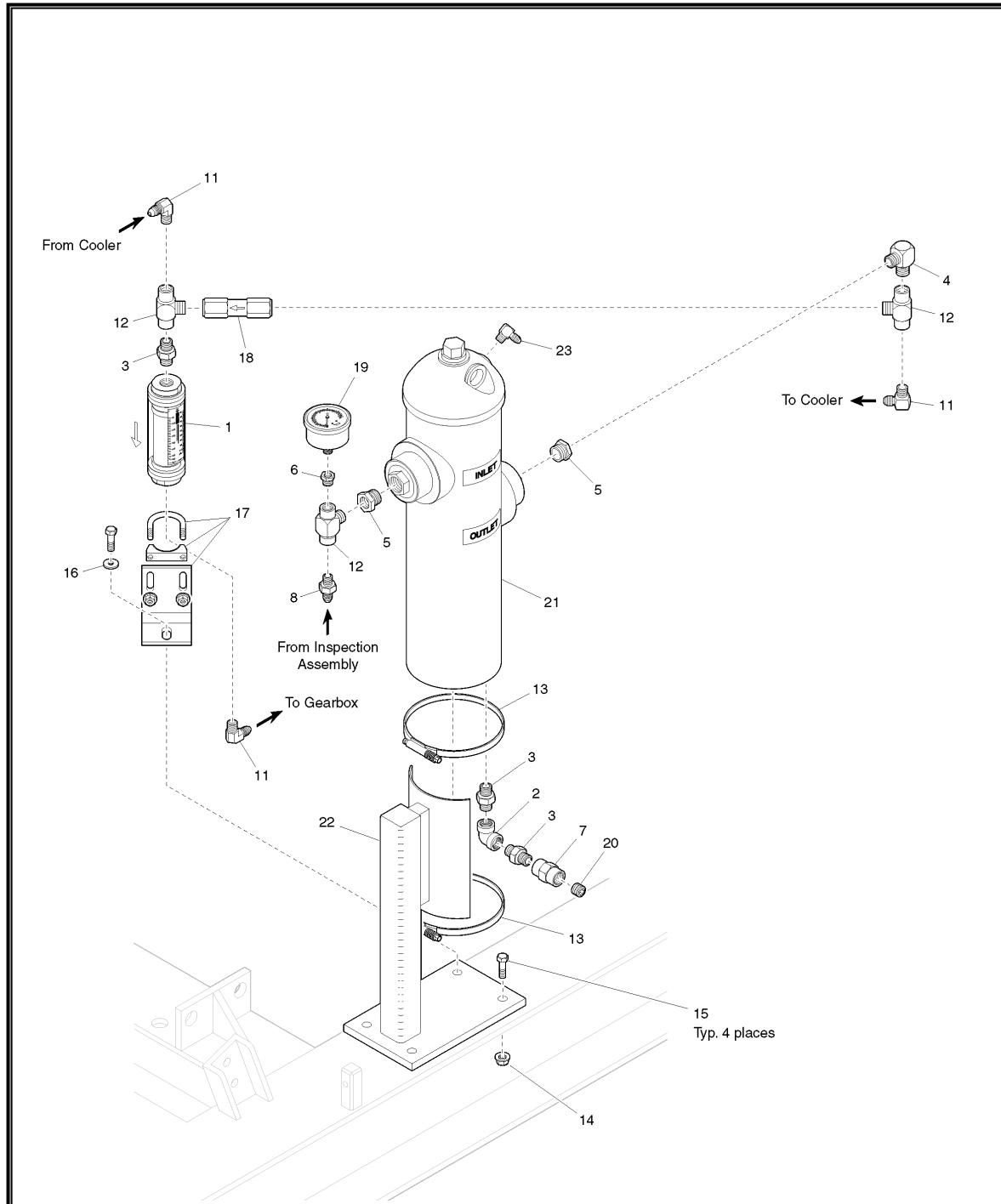
Refer: 1 Illustration

Drawing Title: Skid,Engine,Complete,12V2000-R1238K40 (Tier II),D4P

Item #	Tesco #	Qty	Description
1	1120001	1	Kit,Lube System,12V2000,D4P
2	1120002	1	Kit,Hoses,Engine Skid,12V2000,D4P
3	720358	1	Inspection Assy,Oil Condition,Pump Drive,D2P
4	1120051	1	Engine Package,12V2000-R1238K40,c/w Acc/Rad/Exh,(Tier II)
*5	731134	70	Oil,Motor,Semi-Syn,SAE 15W-40,Tesco
*6	1120060	265	Engine Coolant,Detroit Diesel 50/50 Power Cool
100	1120092	1	Kit,Labels,Stick-On,Engine Skid,D2P/D4P/D6P
101	720082	2	Decal,Danger,Equip Auto Start/Stop
102	1120086	2	Decal,Tesco Synthetic Blend Motor Oil SAE15W-40,5"x2",Red
103	1120032	2	Decal,"Engine Coolant,Detroit Diesel 50/50 Power Cool",5"x2",Red

* - Item is not shown in Illustration

KIT, LUBE SYSTEM, 12V2000, D4P



Note: Some items may not be shown for clarification purposes.

Rev.	By	Date	ICD#	Description
0	VNL	060704		Issued for manufacture

		Title	
		Kit, Lube System, 12V2000, D4P	
File No.	I-1120001-1.ai	Model	D4P
Dwg. No.	I-1120001	Rev.	0
Drawn	VNL	Checked	
Date	060704	Appr.	
Sheet	1 of 2		

Parts List



Part # 1120001

Drawing # I-1120001

Rev. 0

Page 2 of 2

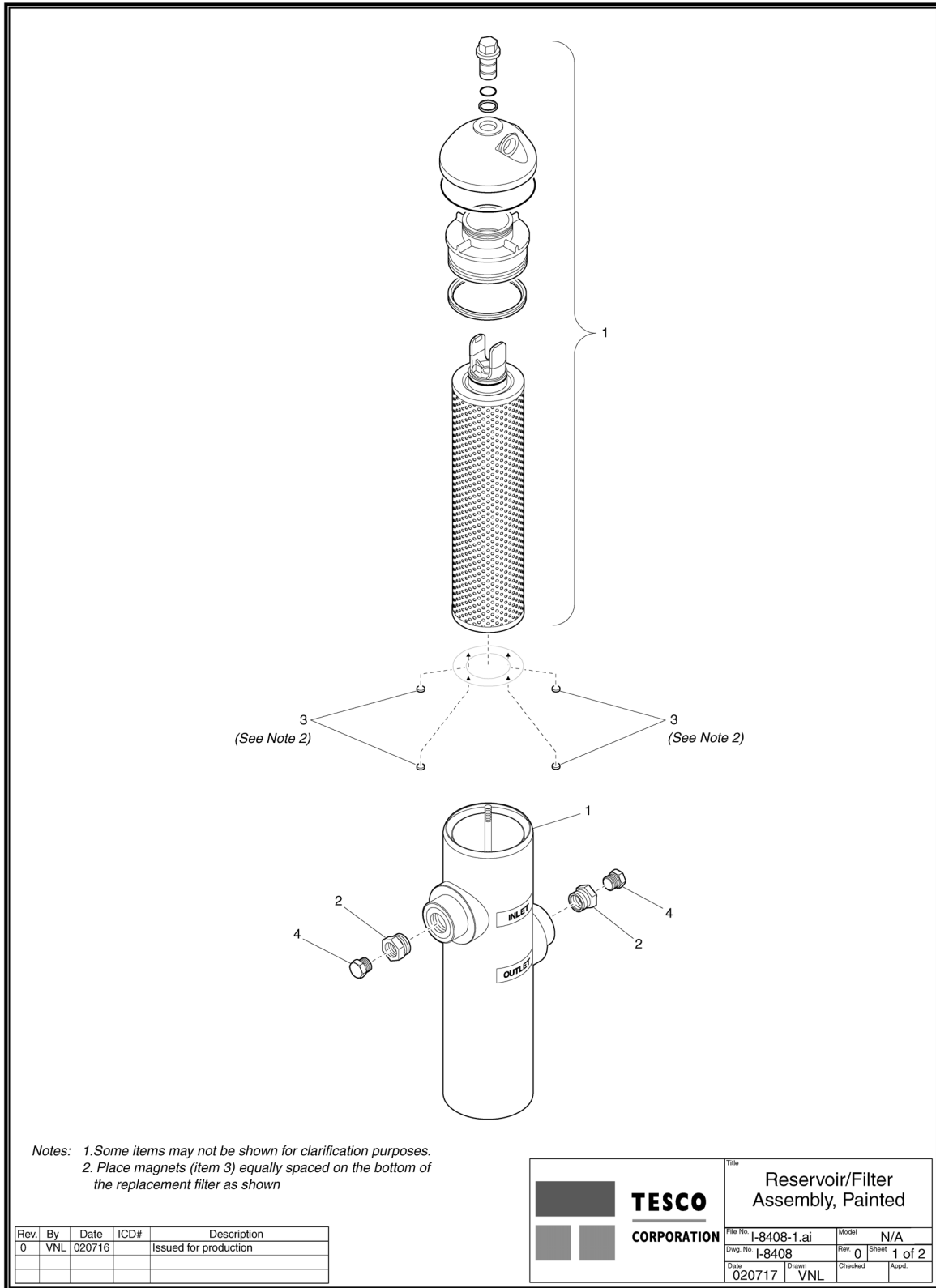
File # I-1120001.xls

Refer: 1 Illustration

Drawing Title: Kit,Lube System,12V2000,D4P

Item #	Tesco #	Qty	Description
1	0068	1	METER, FLOW, 15 GPM, 1/2"NPT, ROUND
2	0128	1	Fitting, Pipe, 90°Elb, 2000-psi, 1/2", FNPT
3	0235	3	Fitting, Hyd, Str, #8MNPTx#8MNPT
4	0242	2	Fitting, Hyd, 90°Elb, #8MNPTx#8MNPT
5	0243	2	Fitting, Hyd, Str, #12MNPTx#8FNPT
6	0247	1	Fitting, Hyd, Str, #8MNPTx#4FNPT
7	0266	1	Fitting, Hyd, Str, #8FNPTx#8FNPT
8	0283	1	Fitting, Hyd, Str, #8MJICx#8MNPT
9	0287	1	Fitting, Hyd, Str, #16MJICx#16MNPT
10	0290	1	Fitting, Hyd, Str, #8MJICx#4MNPT
11	0318	3	Fitting, Hyd, 90°Elb, #8MJICx#8MNPT
12	0380	3	Fitting, Hyd, Tee, #8FNPTx#8FNPTx#8MNPT-Br
13	0700	2	Clamp, Hose, Constant Torque, 6-1/2"
14	720195	4	Nut, Hex, Lock, Spirallock, Flg, 1/2"-13SPL, Gr8, Pld
15	0990	4	Screw, Cap, Hex Hd, 1/2"-13UNCx2", Gr8, Pld
16	13723	1	Washer, Flat, Type A, Wide, 1/2", Hardened, Pld
17	16533	1	Bracket, Oil Filter, Lubrication System, D6P
18	3430	1	Valve, Check, Inline, 1/2"FNPT, 3000psi-WP, 65psi-CP
19	5175	1	Gauge, Liq Fill, 0-200psi/kPa, 2.5ODx1/4MNPT, CBM, U-CI
20	5187	1	Fitting, Pipe, Plug, Skt Drive, 1/2"MNPT, Blk
21	8408	1	Reservoir/Filter, Lubrication System, D2P/D6P
22	8539	1	Mount, Reservoir/Filter, Lubrication System, D2P/D6P
23	0323	1	Fitting, Hyd, 90°Elb, #4MJICx#4MNPT

RESERVOIR/FILTER ASSY, PAINTED





Parts List

Part #	8408
--------	------

Drawing # I-8408

Rev. 0

Refer: 1 Illustration

File # I-8408.xls

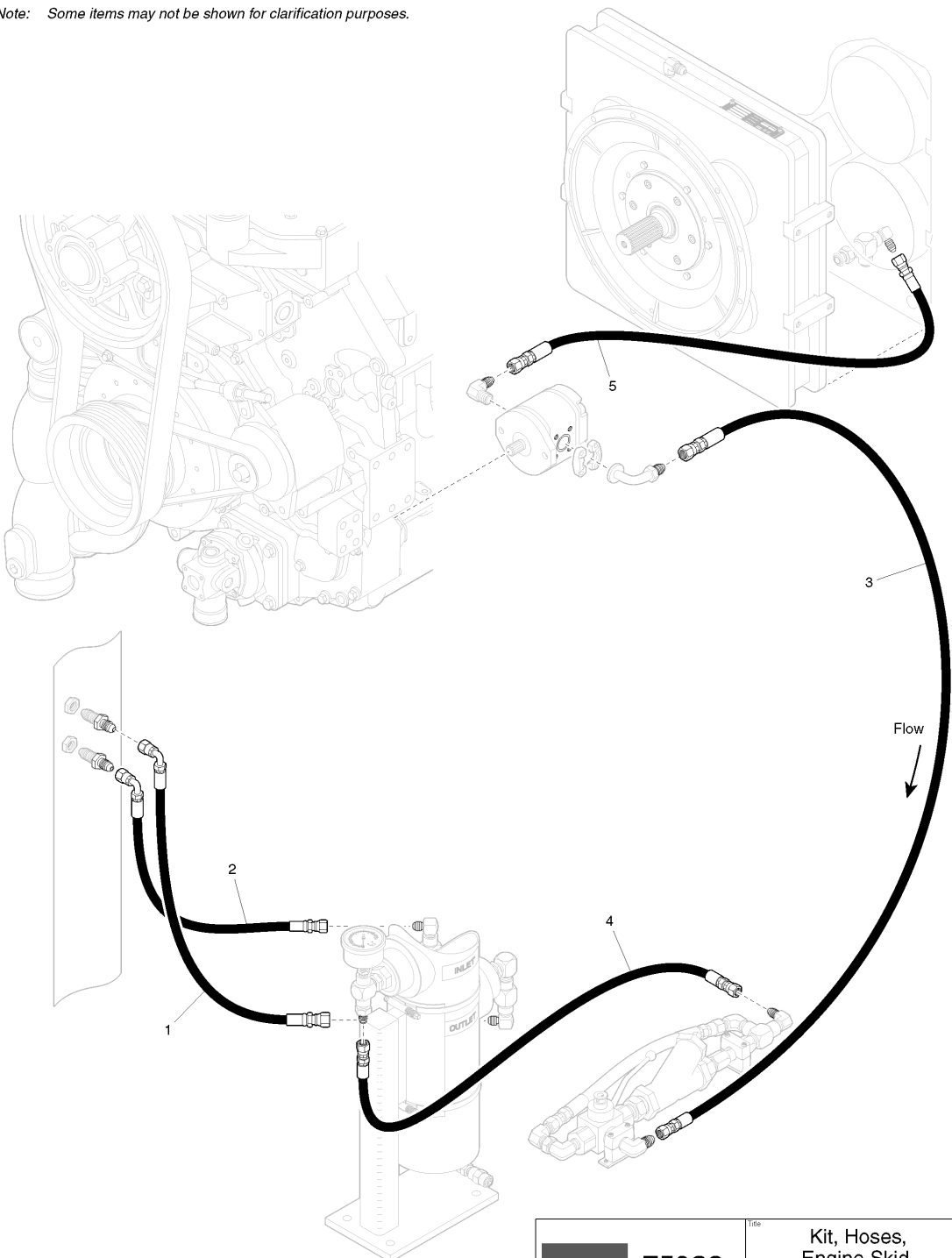
Page 2 of 2

Drawing Title: ASSEMBLY, RESERVOIR/FILTER, PAINTED

Item #	Tesco #	Qty	Description
1	7489	1	RESEVOIR, COOLER SYSTEM W/FILT
2	8297	2	BUSHING, HEX 2-1/2 X 3/4, 150#, M.I.
3	9227	4	MAGNET, 1/2 X .125T, NEON
4	11295	2	FTG, HYD, PLUG, HEX, 3/4" MPT

KIT, HOSES, ENGINE SKID, 12V2000, D4P

Note: Some items may not be shown for clarification purposes.



Rev.	By	Date	ICD#	Description
0	VNL	060705		Issued for manufacture

		Title	
		Kit, Hoses, Engine Skid, 12V2000, D4P	
File No	I-1120002-2.ai	Model	D4P
Dwg No	I-1120002	Rev	0
Drawn	060705	Checked	VNL

Parts List



Part # 1120002

Drawing # I-1120002

Rev. 0

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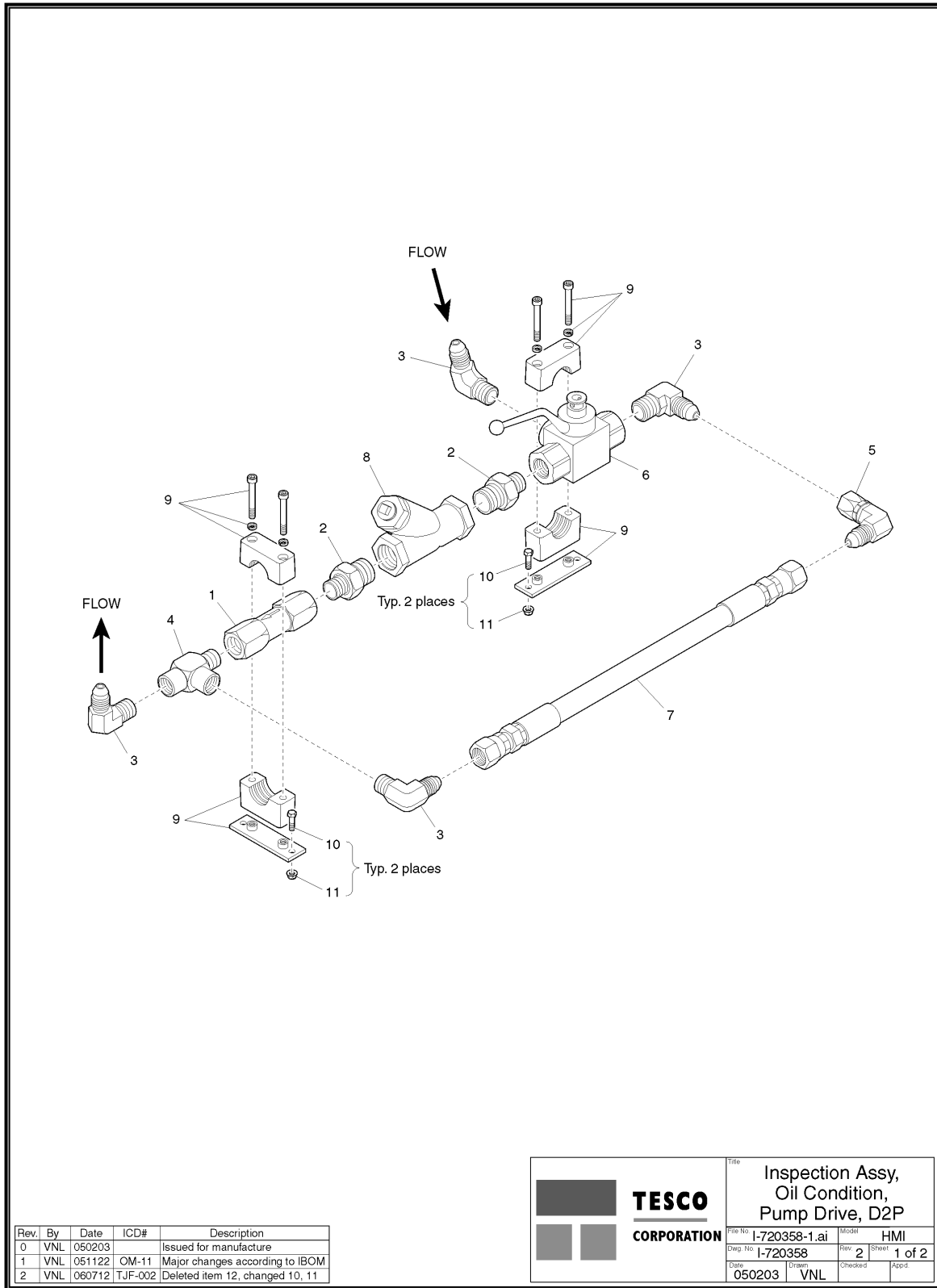
File # I-1120002.xls

Refer: 1 Illustration

Drawing Title: Kit,Hoses,Engine Skid,12V2000,D4P

Item #	Tesco #	Qty	Description
1	1120003	1	Hose,Hyd,100R2-AT,#8x80",FJICx90°FJIC
2	1120004	1	Hose,Hyd,100R2-AT,#8x73",FJICx90°FJIC
3	3374	1	Hose,Hyd,100R2-AT,#8x85",FJICxFJIC
4	5489	1	Hose,Hyd,100R2-AT,#8x94",FJICxFJIC
5	7278	1	Hose,Hyd,100R2-AT,#12x105",FJICxFJIC

INSPECTION ASSY, OIL CONDITION, PUMP DRIVE, D2P



Rev.	By	Date	ICD#	Description
0	VNL	050203		Issued for manufacture
1	VNL	051122	OM-11	Major changes according to IBOM
2	VNL	060712	TJF-002	Deleted item 12, changed 10, 11

		Title	
		Inspection Assy, Oil Condition, Pump Drive, D2P	
File No		Model	
I-720358-1.ai		HMI	
Dwg. No		Rev	
I-720358		2	
Date		Sheet	
050203		1 of 2	
Drawn		Checked	
VNL		Appd	

Parts List



Part # 720358

Drawing # I-720358

Rev. 2

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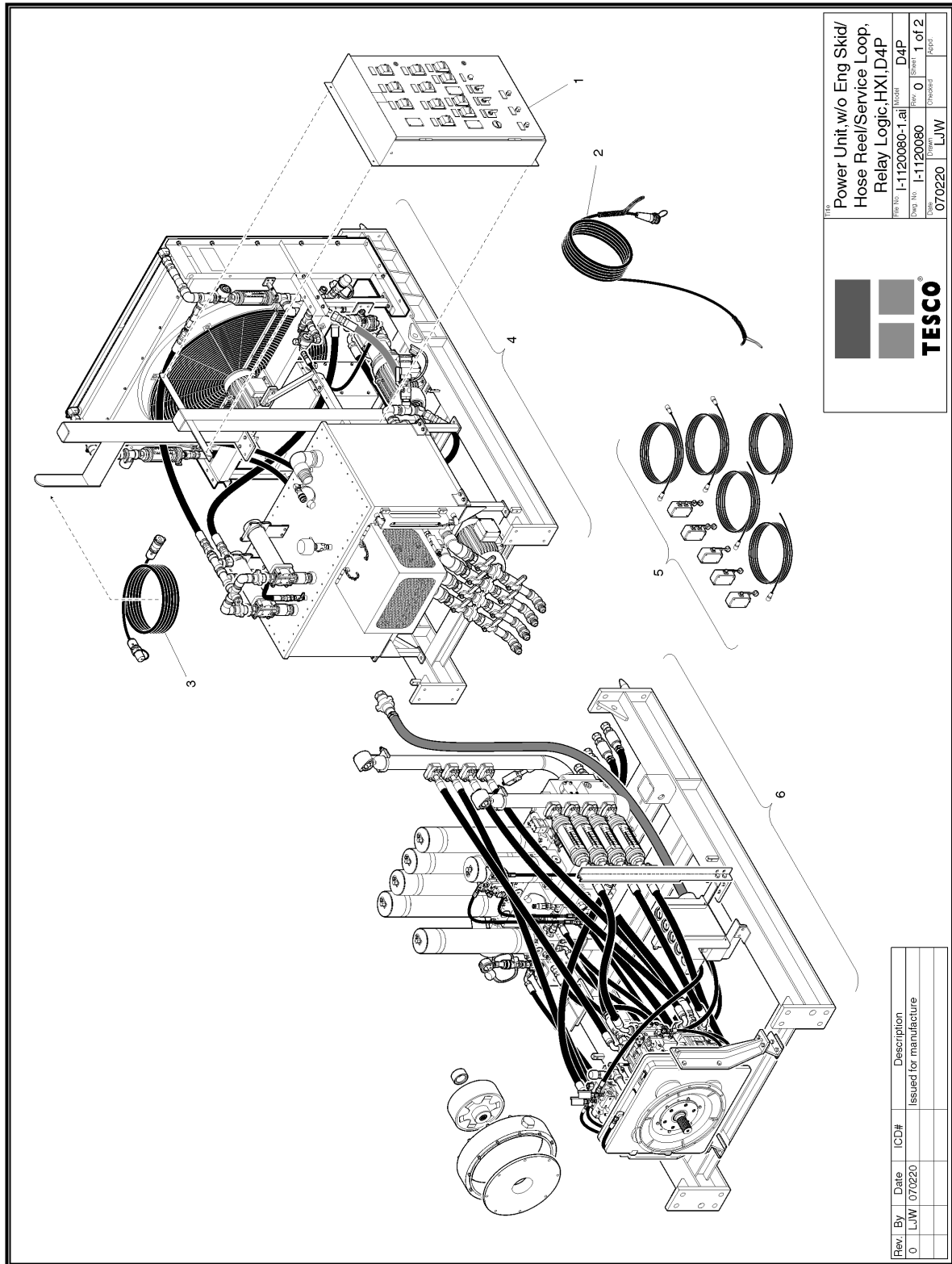
File # I-720358.xls

Refer: 1 Illustration

Drawing Title: Inspection Assy,Oil Condition,Pump Drive,D2P

Item #	Tesco #	Qty	Description
1	0029	1	Valve,Check,Inline,1/2"FNPT,3000-psi WP,5-psi CP
2	720478	2	Fitting,Hyd,Str,#16MNPTx#8MNPT
3	0318	4	Fitting,Hyd,90°Elb,#8MJICx#8MNPT
4	0381	1	Fitting,Hyd,Tee,#8MNPT-Runx#8FNPTx#8FNPT
5	0354	1	Fitting,Hyd,90°Elb,#8MJICx#8FJIC
6	720459	1	Valve,Ball,3-Way,5075psi,1/2"FNPT,Stl,(w/Lock Kit)
7	731052	1	Hose,Hyd,100R2-AT,#8x15",FJICxFJIC
8	720359	1	Strainer,Y-Type,Mag,150-psi,1"FNPTx1"FNPT,Brass
9	720661	2	Clamp,Pipe,28mm-OD,Std Series
10	3422	4	Screw,Cap,Hex Hd,1/4"-20UNCx1-3/4",Gr8,Pld
11	720473	4	Nut,Hex,Lock,Spiralock,Flg,1/4"-20SPL,Gr8,Pld

POWER UNIT, w/O ENG SKID/HR/SL, RELAY LOGIC, HXI



TESCO	
TITLE Power Unit, w/o Eng Skid/ Hose Reel/Service Loop, Relay Logic, HXI, D4P	
P/N I-1120080-1 all	MOUNT D4P
QTY 0	ORDER 1 of 2
DATE 07/02/20	DRAWN LW
CHECKED LW	APPROVED LW

Rev.	By	Date	ICD#	Description
0	LW	07/02/20		Issued for manufacture

Parts List



Part # 1120080

Drawing # I-1120080

Rev. 0 Page 2 of 2

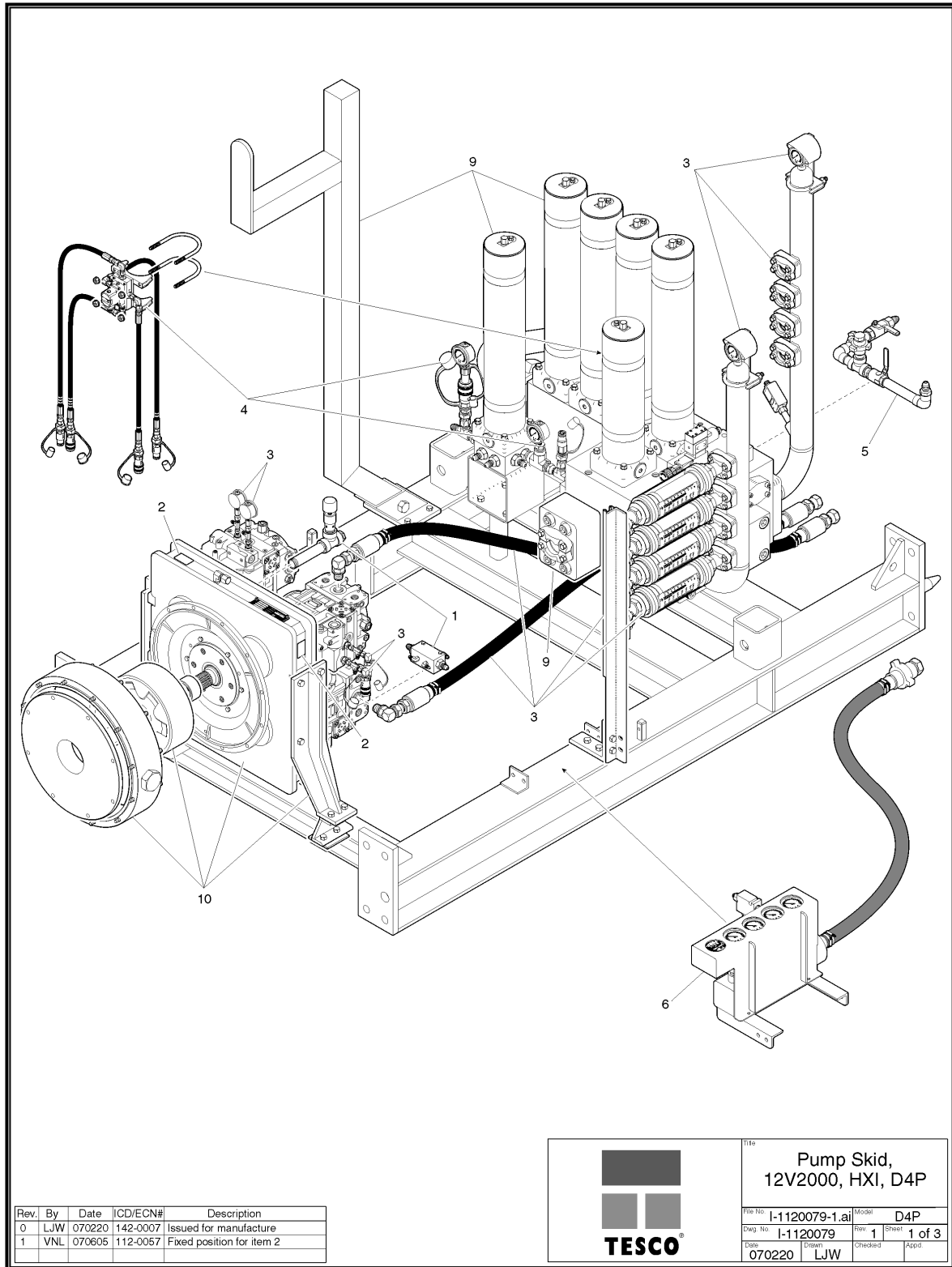
File # I-1120080.xls

Refer: 1 Illustration


Drawing Title: Power Unit,w/o Eng Skid/Hose Reel/Service Loop,Relay Logic,HXI,D4P

Item #	Tesco #	Qty	Description
1	3302	1	ASSY,MAIN CONTROL PANEL,HS/HC
2	770704	1	Assy,Cord,Pgtl,Female,Robotics,D2P/D4P/D6P
3	7222	1	Cord,Main Power,4/4CX250FT,W/M&F
4	730624	1	Tank Skid,D4P
5	730668	1	Kit,Electrical Installation,CAT3412,D4P
6	1120079	1	Pump Skid,12V2000,HXI,D4P

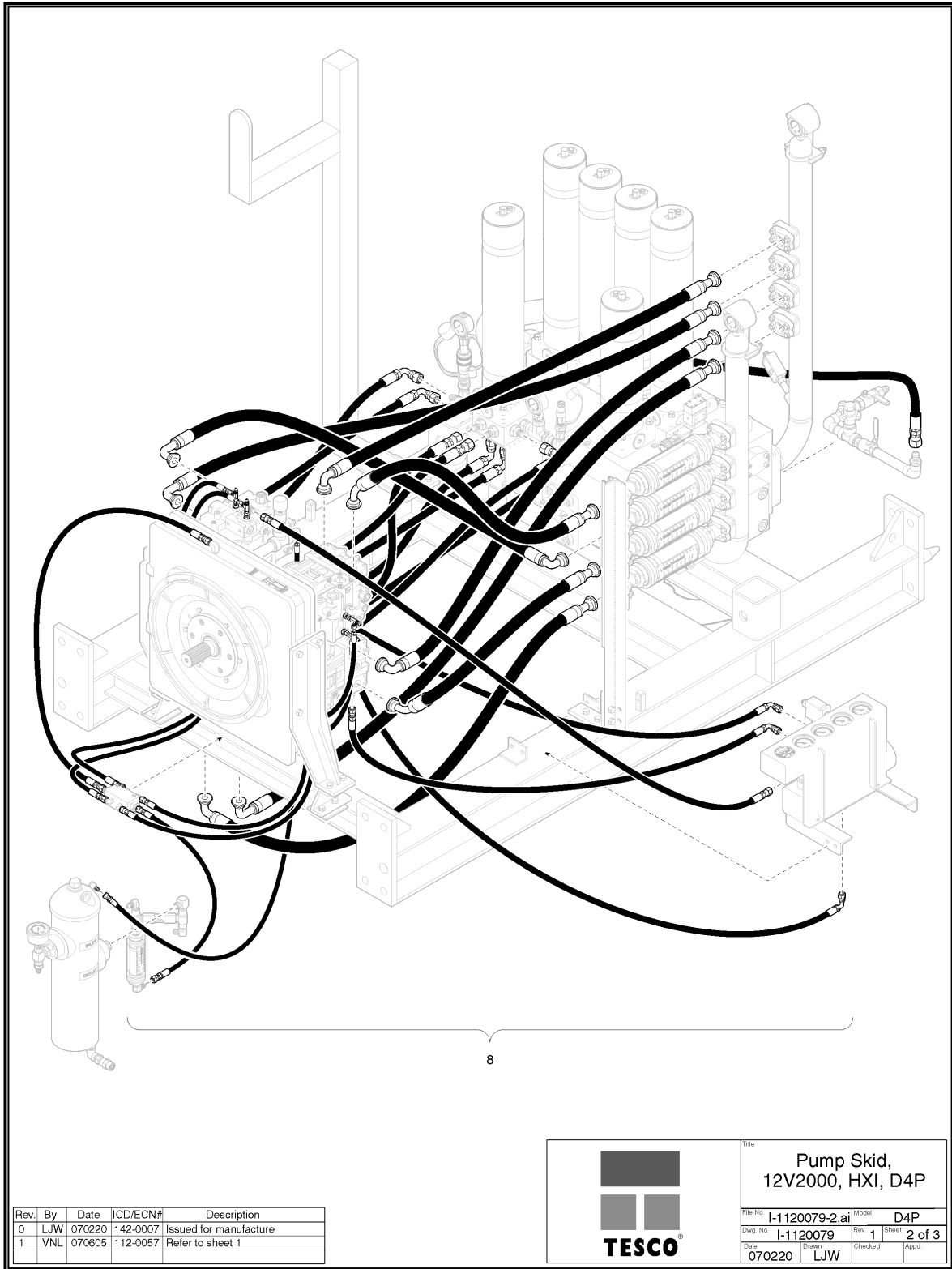
PUMP SKID, 12V200, HXI, D4P



Rev.	By	Date	ICD/ECN#	Description
0	LJW	070220	142-0007	Issued for manufacture
1	VNL	070605	112-0057	Fixed position for item 2



Title			
Pump Skid, 12V200, HXI, D4P			
File No	I-1120079-1.ai	Model	D4P
Dwg No	I-1120079	Rev	1
		Sheet	1 of 3
Date	070220	Drawn	LJW
		Checked	
		Appd	



Parts List



Part # 1120079

Drawing # I-1120079

Rev. 1

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File # I-1120079.xls

Refer: 2 Illustrations

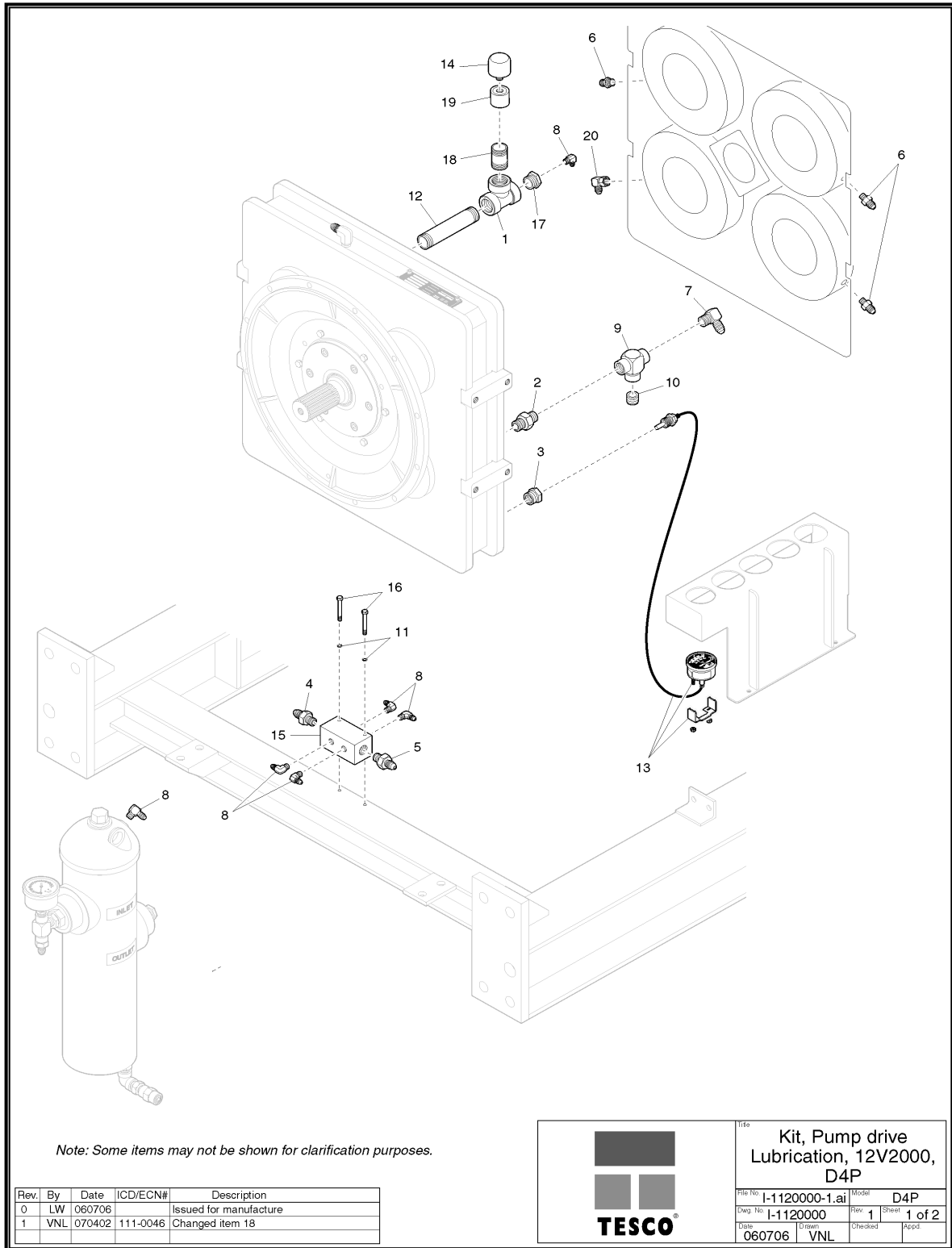
Drawing Title: Pump Skid,12V2000,HXI,D4P

Item #	Tesco #	Qty	Description
1	1120000	1	Kit,Pump drive Lubrication,12V2000,D4P
2	1120087	2	Decal,Tesco Single Weight Motor Oil SAE40, 5"x2" Red
3	730610	1	Kit,Filter Manifold & Pump Assy,D4P
4	730612	1	Kit,Charger Filter,D4P
5	730613	1	Kit,Hot Oil Shuttle,D4P
6	730614	1	Kit,Case Drain Plumbing,D4P
7	730658	1	Skid,Pump,Code 62,CAT3412 D4P
8	730770	1	Kit,Hoses,Hyd,Pump Skid,CAT 3412,D4P
9	1420012	1	Kit,Filter Manf & Charge Filter Instl,12V2000,HXI,D4P
10	731245	1	Kit,Pump Installation,12V2000,D4P
*11	731135	23	Oil,Motor,SAE 40,Tesco

* - Item is not shown in Illustration

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KIT, PUMP DRIVE LUBRICATION, 12V2000, D4P



Parts List

Part # 1120000

Drawing # I-1120000

Rev. 1

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File # I-1120000.xls

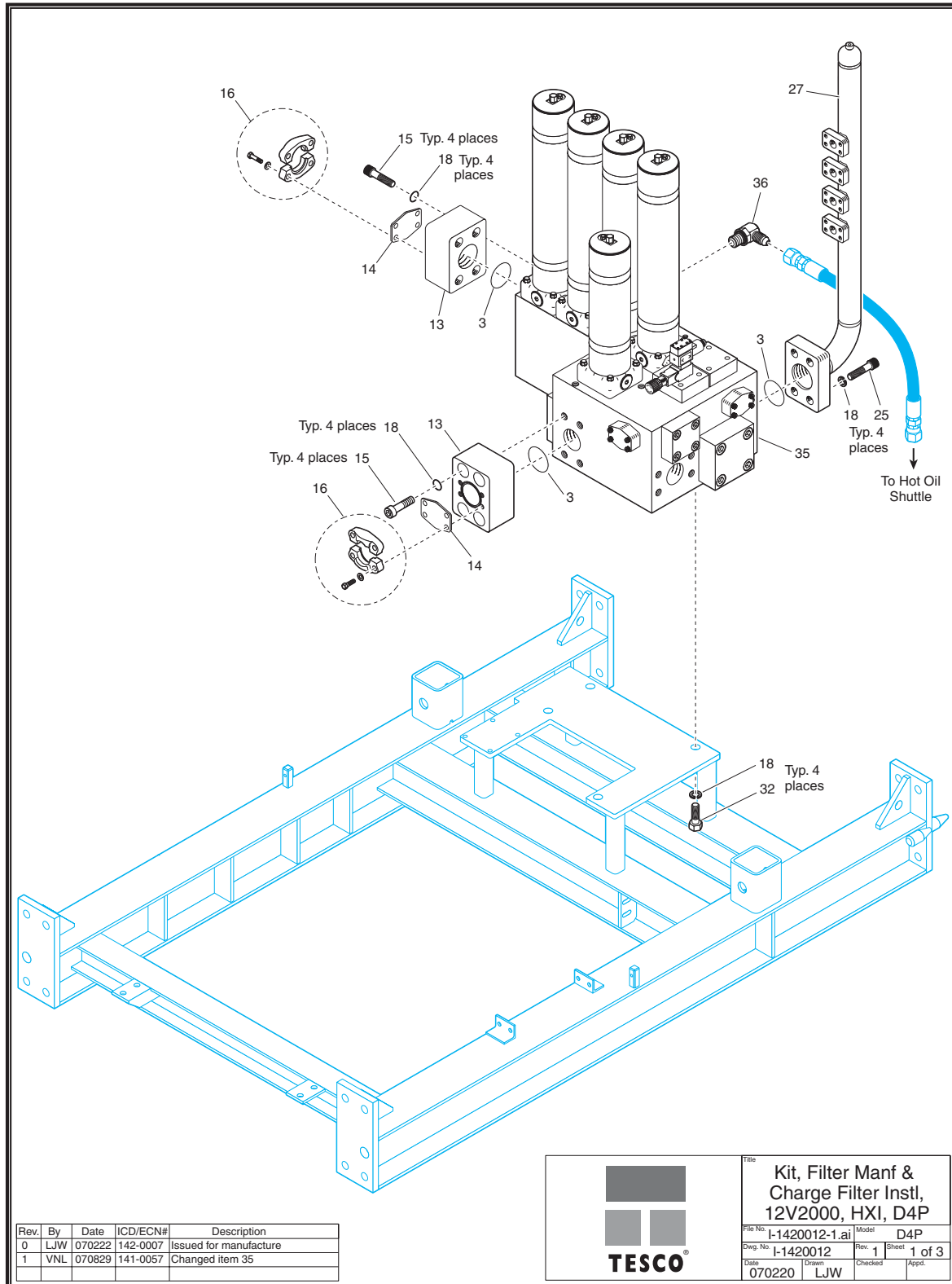
Refer: 1 Illustration

Drawing Title: Kit,Pump drive Lubrication,12V2000,D4P



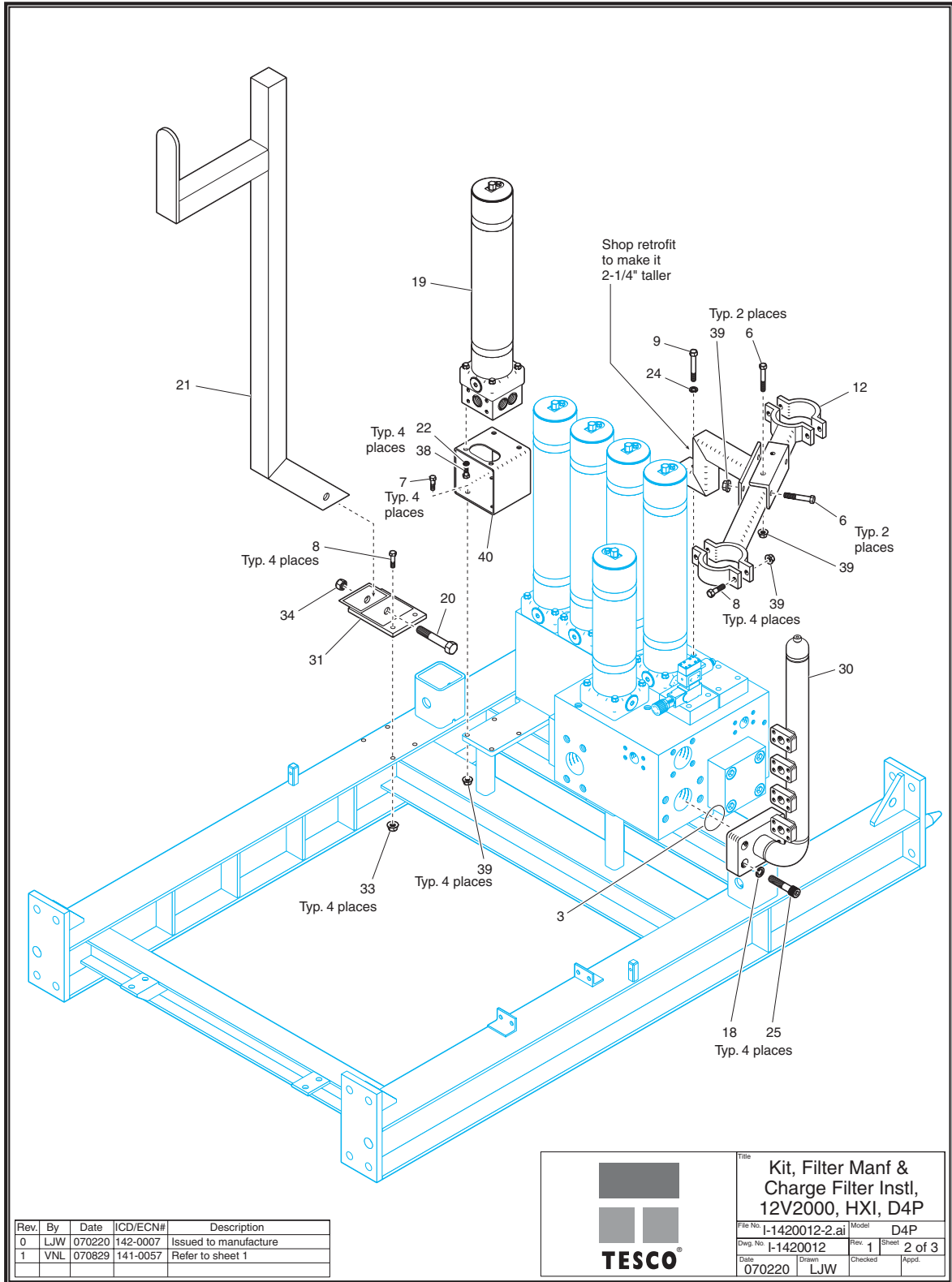
Item #	Tesco #	Qty	Description
1	0173	1	Fitting,Pipe,Tee,2000-psi,2",FNPT
2	0237	1	Fitting,Hyd,Str,#12MNPTx#12MNPT
3	0243	1	Fitting,Hyd,Str,#12MNPTx#8FNPT
4	0281	1	Fitting,Hyd,Str,#12MJICx#12MNPT
5	0282	1	Fitting,Hyd,Str,#8MJICx#12MNPT
6	0285	3	Fitting,Hyd,Str,#4MJICx#4MNPT
7	0313	1	Fitting,Hyd,90°Elb,#12MJICx#12MNPT
8	0323	8	Fitting,Hyd,90°Elb,#4MJICx#4MNPT
9	0362	1	Fitting,Hyd,Tee,#12FNPTx#12FNPTx#12FNPT
10	0451	1	Plug,Magnetic,Skt Drive,3/4"MNPT
11	10634	2	Washer,Lock,Helical Spring,1/4",Alloy,Pld
12	730757	1	Fitting,Pipe,Nipple,Sch80,2"MNPTx18"Lg
13	3562	1	SWITCH,TEMP,GAUGE,MURPHY,250F
14	2700	1	Breather,Air Filter,3/4"MNPT,Nylon
15	3330	1	MANIFOLD, LUBE, PUMP BOX, D4P
16	3695	2	Screw,Cap,Hex Hd,1/4"-20UNCx2-1/2",Gr8,Pld
17	3877	1	Fitting,Pipe,Bushing,Hex,1/4"FNPTx2"MNPT
18	1335	1	Fitting,Pipe,Nipple,Sch80,2"MNPTx3"Lg
19	7651	1	CAP,FILLER,THRD,3/4NPT,D2P/D4P
20	0353	1	Fitting,Hyd,90°Elb,#4MJICx#4FJIC

KIT, FILTER MANIFOLD & CHARGE FILTER INSTL, HXI, D4P




Rev.	By	Date	ICD/ECN#	Description
0	LJW	070222	142-0007	Issued for manufacture
1	VNL	070829	141-0057	Changed item 35

Kit, Filter Manf & Charge Filter Instl, 12V2000, HXI, D4P			
File No.	I-1420012-1.ai	Model	D4P
Dwg. No.	I-1420012	Rev.	1
Date	070220	Drawn	LJW
		Checked	
		Appd.	



Rev.	By	Date	ICD/ECN#	Description
0	LJW	070220	142-0007	Issued to manufacture
1	VNL	070829	141-0057	Refer to sheet 1

		Title	
		Kit, Filter Manf & Charge Filter Instl, 12V2000, HXI, D4P	
File No. I-1420012-2.ai		Model D4P	
Dwg. No. I-1420012		Rev. 1 Sheet 2 of 3	
Date	Drawn	Checked	Appd.
070220	LJW		

Parts List



Part # 1420012

Drawing # I-1420012

Rev. 1

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File # I-1420012.xls

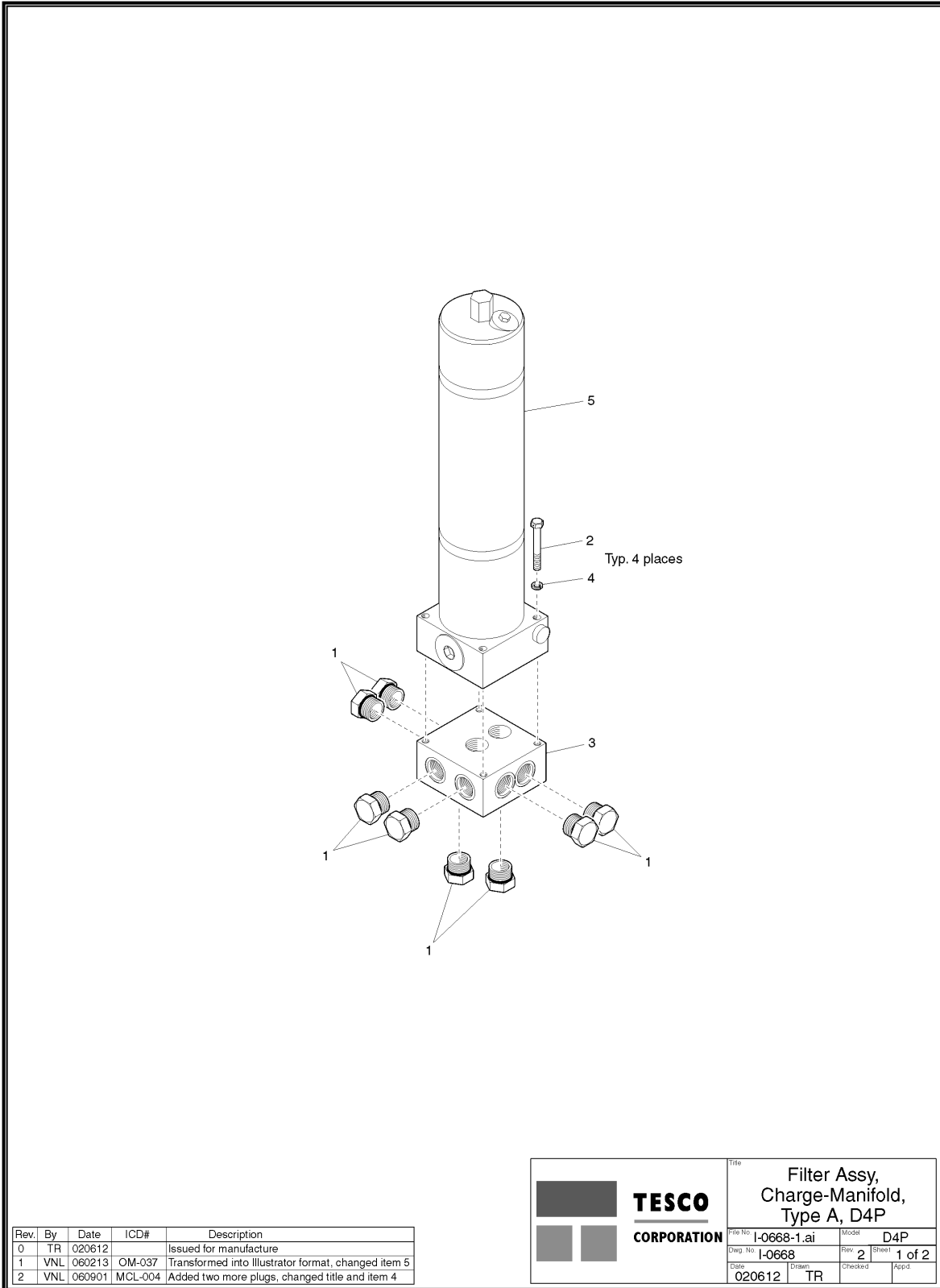
Refer: 2 Illustrations

Drawing Title: Kit,Filter Manf & Charge Filter Instl,12V2000,HXI,D4P

Item #	Tesco #	Qty	Description
1			Not used
2			Not used
3	0609	4	O RING,DURO,90,NITRIL, N90-237
4			Not used
5			Not used
6	0982	4	CAP,GR8,NC,PLT,1/2 X 3-1/2
7	0983	4	CAP,GR8,NC,PLT,1/2 X 1-1/2
8	0990	8	CAP,GR8,NC,PLT,1/2 X 2
9	3659	1	Screw,Cap,Hex Hd,3/4"-10UNCx6",Gr8,Pld
10			Not used
11			Not used
12	13168	1	SUPPORT,HEADER FLTR BLK,D4P/6P
13	1420007	2	Adaptor,Flange,2"C62x3"C62(O-ring)
14	1420008	2	Cover Plate,Protective,C62,2"
15	1420009	8	Screw,Cap,Skt Hd,1-1/8"-7UNCx5",Gr8,Pld
16	11298	2	KIT,FLANGE,SPLIT,C62,2"
17			Not used
18	13914	20	WASHER,LOCK,ALLOY,GR8,1-1/8
19	0668	1	MANIFOLD,CHARGE FILTER,TYPE A
20	3672	1	CAP,GR8,NC,PLT,1 X 5-1/2
21	4072	1	SUPPORT,ELECTRIC CABLE,D6P
22	5881	4	WASHER,LOCK,ALLOY,PLTD,1/2"
23			Not used
24	7855	1	WASHER,LOCK,ALLOY,PLTD,3/4"
25	7856	8	CAP,SKT,HD,NC,1-1/8 X 4
26			Not used
27	730630	1	Header,Reverse In,Code 62,CAT3412,D4P
28			Not used
29			Not used
30	730629	1	Header,Forward In,Code 62,CAT3412,D4P
31	8370	1	SUPPORT FOOT,ELEC. CABLE,D6P
32	8934	4	CAP,GR8,NC,PLT,1-1/8 X 3
33			Not used
34	720197	1	Nut,Hex,Lock,Spirallock,Flg,1"-8SPL,Gr8,Pld
35	1410018	1	Manifold,Filter,MK2,HCI,D6P
36	0194	1	Fitting,Hyd,90°Elb,#20MJICx#20MORB
37			Not used
38	0988	4	Screw,Cap,Hex Hd,1/2"-13UNCx1-1/4",Gr8,Pld
39	720195	16	Nut,Hex,Lock,Spirallock,Flg,1/2"-13SPL,Gr8,Pld
40	5878	1	BRACKET,CHARGE FILTER,HMI

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CHARGE-MANIFOLD, FILTER ASSY, TYPE B, D2P/D4P



Rev.	By	Date	ICD#	Description
0	TR	020612		Issued for manufacture
1	VNL	060213	OM-037	Transformed into Illustrator format, changed item 5
2	VNL	060901	MCL-004	Added two more plugs, changed title and item 4

		Title	
		Filter Assy, Charge-Manifold, Type A, D4P	
Part No.		Model	
I-0668-1.ai		D4P	
Dwg. No.		Rev. Sheet	
I-0668		2 1 of 2	
Date	Drawn	Checked	App'd.
020612	TR		

Parts List



Part # 0668

Drawing # I-0668

Rev. 2

Page 2 of 2

File # I-0668.xls

Refer: 1 Illustration

Drawing Title: Filter Assy, Charge-Manifold, Type A, D4P

Item #	Tesco #	Qty	Description
1	0430	8	Fitting, Hyd, Plug, Hex Hd, #16MORB
2	0982	4	Screw, Cap, Hex Hd, 1/2"-13UNCx3-1/2", Gr8, Pld
3	10691	1	BLOCK, MANIFOLD, CHARGE PRESS, A
4	5881	4	Washer, Lock, Helical Spring, 1/2", Alloy, Pld
5	11548	1	Filter, Base-Ported, Cartridge, 3000psi, 100gpm

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MANIFOLD, FILTER, MK2

ITEM	PART NO.	QTY	DESCRIPTION	WEIGHT
1	10077	1	BLOCK, FILTER MANIFOLD, HCl (1000009)	
2	10270	2	PLATE, COVER, MANIFOLD, HCl (1000007)	
3	10071	8	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000001)	
4	10271	2	PLATE, COVER, MANIFOLD, HCl (1000002)	
5	11671	12	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000003)	
6	1410007	1	VALVE, PILOT, PRESSURE, RELIEF, 145-2000-PSI, MANIFOLD (1410007)	
7	10080	1	VALVE, DRUM, 200-PSI, 1/4" X 1/8" X 1/8" (1000004)	
8	8180	1	FILTER, COARSE, 5, ELEMENT (1000005)	
9	8181	4	FILTER, CAN, ABRAS, W/VALVE, 2000 (1000006)	
10	10840	1	COVER, MANIFOLD, BLOCK, MANIFOLD, HCl (1000007)	
11	8080	2	O-RING, MANIFOLD, 11/16" X 1/16" X 1/16" (1000008)	
12	2700	8	FITTING, HYD, PLUG, HKT, HD, MANIFOLD (1000009)	
13	10272	1	VALVE, AND, POPPET, RELIEF (1000010)	
14	8010	1	VALVE, BUTTLE, HYD (1000011)	
15	8080	1	VALVE, RESERVE, 2000, DOLMIT (1000012)	
16	10880	1	PLATE, TAPPING, MANIFOLD, BLOCK (1000013)	
17	1410008	1	VALVE, PILOT, RELIEF, DRUM, 145-2000-PSI, MANIFOLD (1410008)	
18	10273	1	PLATE, COVER, MANIFOLD, HCl (1000014)	
19	10044	4	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000015)	
20			NOT LISTED	
21	10272	2	VALVE, CHECK, DIRECT, ACTING, CARTRIDGE, 2200 LBS/IN ² (1000016)	
22	10270	2	VALVE, CHECK, PILOT, OPERATED, CARTRIDGE, 2000 LBS/IN ² (1000017)	
23	10273	1	SPACER, DRUM, FILTER (1000018)	
24	8087	4	FITTING, TERT, PORT, 1000-PSI, MANIFOLD, W/FLANGE, SEAL (1000019)	
25	10841	8	FLANGE, ANGLE, 1/8" X 1/8" X 1/8" (1000020)	
26	10270	1	VALVE, AND, POPPET, RELIEF (1000021)	
27	80010	1	MANIFOLD, SUBPLATE, DRUM, THRU (1000022)	
28	10840	2	O-RING, MANIFOLD, 11/16" X 1/16" X 1/16" (1000023)	
29	2047	1	INLET, LAMP, HYD, 2000, VALVE (1000024)	
30	2048	8	O-RING, MANIFOLD, 11/16" X 1/16" X 1/16" (1000025)	
31	10272	3	PLUG, CHECK, FILTER (1000026)	
32	8082	20	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000027)	
33	10271	20	WASHER, LOCK, HELICAL, 1/8" X 3/16" X 1/16" (1000028)	
34	10270	4	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000029)	
35	4012	4	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000030)	
36	8081	4	FITTING, HYD, 1/8" X 1/8" X 1/8" (1000031)	
37	1400	1	FITTING, HYD, STR, MANIFOLD (1000032)	
38	720070	1	TUBE, MECH, LAMP, 5/8" X 1/8" X 1/8" (1000033)	
39	2070	1	HOSE, HYD, 1/8" X 1/8" X 1/8" (1000034)	
40	8220	1	FITTING, HYD, STR, MANIFOLD (1000035)	
41	8410	1	DISCONNECT, ALUM, COUPLER, 1/8" X 1/8" X 1/8" (1000036)	
42	11504	1	MANIFOLD, TESCO, THREE, LINE, 1/4" X 1/4" X 1/4" (1000037)	
43	10840	1	FITTING, HYD, PLUG, HKT, HD, MANIFOLD (1000038)	
44	10870	4	GASKET, PAINT, COVER, FRAME, F CODE, 60, FLANGE, PORT (1000039)	
45	8084	8	SCREW, CAP, HKT, HD, 1/8" X 3/16" X 0.12" (1000040)	
46	14040	4	SCREW, DRIVE, END, HELIX, 1/8" X 1/8" X 1/8" (1000041)	
47	10077	4	COVER, PLATE, PAINT, FRAME, 1" COVER, FLANGE, PORT (1000042)	
48	1410010	1	MANIFOLD, DRUM, PLATE, DRUM, TO, ALT, EXT, 1/8" X 1/8" (1000043)	
49	8407	1	HOSE, HYD, 1/8" X 1/8" X 1/8" (1000044)	
50	8014	1	FITTING, HYD, TEE, MANIFOLD, 1/8" X 1/8" X 1/8" (1000045)	
51	8082	1	PLUG, CHECK, DISCONNECT, AMP, BLACK (1000046)	
52	7204	1	LOCK, BUSH, TUMBLER, RELIEF, VALVE (1000047)	

NOTES:
 1. TO BE PAINTED TESCO BLUE AS PER TESCO SPECIFICATION STD0008.

POPPET KIT
 10730 CEE5888RP
 10737 CEE4088RP
 10738 DE4088AVND08
 10739 CEE2888AVND08

SEAL KIT FOR MOOG
 10271
 10270
 10272
 10273

VICKERS OEM#
 CVI-88-DC18-L-40-ENG
 CVI-40-DC18-L-40-ENG
 CVI-40-C10F-C-40-ENG
 CVI-25-C10F-H-40-ENG

SEAL KIT FOR VICKERS
 1410010
 1410012
 1410012
 1410016

REVISIONS:
 0 1410014 DETAIL RELEASE

TITLE: MANIFOLD, FILTER, MK2, HCl, D6P

DATE: 18AUG2007

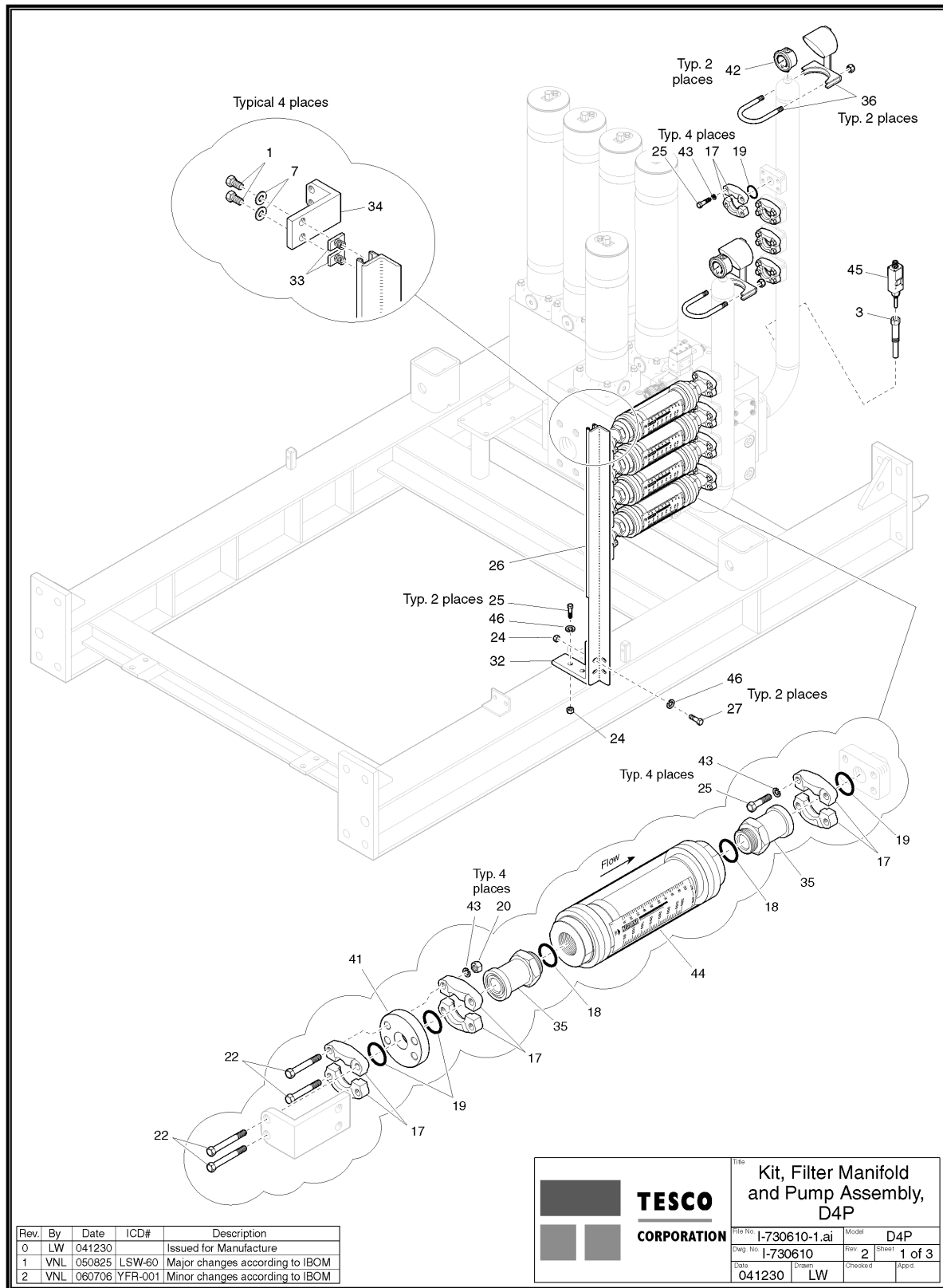
REV: 0

1 OF 1

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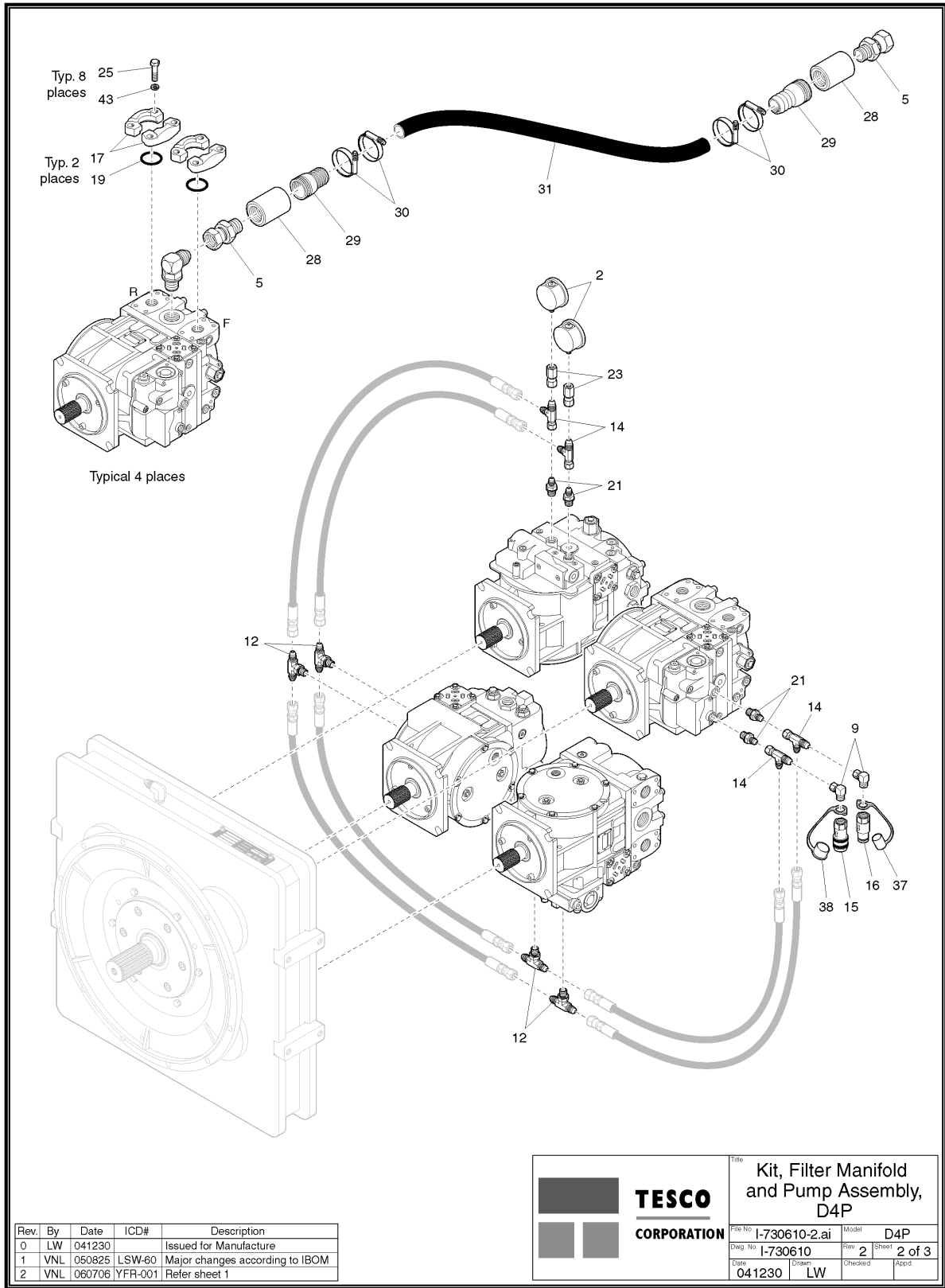
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Kit, Filter Manifold & Pump Assy, CAT3412, D4P



Rev.	By	Date	ICD#	Description
0	LW	041230		Issued for Manufacture
1	VNL	050825	LSW-60	Major changes according to IBOM
2	VNL	060706	YFR-001	Minor changes according to IBOM

	Title		Kit, Filter Manifold and Pump Assembly, D4P	
	Part No.	I-730610-1.ai	Model	D4P
	Dwg. No.	I-730610	Rev.	2
	Date	041230	Drawn	LW
		Checked		Appr.
		Sheet	1 of 3	



Rev.	By	Date	ICD#	Description
0	LW	041230		Issued for Manufacture
1	VNL	050825	LSW-60	Major changes according to IBOM
2	VNL	060706	YFR-001	Refer sheet 1



Kit, Filter Manifold and Pump Assembly, D4P			
File No	I-730610-2.ai	Model	D4P
Dwg No	I-730610	Rev	2
Date	041230	Sheet	2 of 3
Drawn	LW	Checked	App'd

Parts List

Part # 730610

Drawing # I-730610

Rev. 2

Page 3 of 3

File # I-730610.xls

Refer: 2 Illustrations

Drawing Title: Kit,Filter Manifold & Pump Assy,D4P



Item #	Tesco #	Qty	Description
1	0988	8	Screw,Cap,Hex Hd,1/2"-13UNCx1-1/4",Gr8,Pld
2	0056	2	Gauge,Liq Filled,0-600psi/kPa,2.5"ODx1/4"MNPT,LM
3	0072	1	THERMO,304,S/S,1/2X3/4X6.0 LAG
4	0194	4	Fitting,Hyd,90°Elb,#20MJICx#20MORB
5	0215	12	Fitting,Hyd,Str,#20MNPTx#20FJIC
6	0243	1	Fitting,Hyd,Str,#12MNPTx#8FNPT
7	13723	8	Washer,Flat,Type A,Wide,1/2",Hardened,Pld
8	0345	1	Fitting,Hyd,Str,#16FJICx#12MJIC
9	0218	2	Fitting,Hyd,90°Elb,#6FJICx#6MNPT
10	0355	3	Fitting,Hyd,90°Elb,#12MJICx#12FJIC
11	0362	1	Fitting,Hyd,Tee,#12FNPTx#12FNPTx#12FNPT
12	12128	4	Fitting,Hyd,Tee,#6MJICx#6MJICx#6MORB-Br
13	0375	1	Fitting,Hyd,Tee,#12MJICx#12FJIC-Runx#12MJIC
14	0376	4	Fitting,Hyd,Tee,#6MJICx#6FJIC-Runx#6MJIC
15	0411	1	Disconnect,Quick,Coupler,74Series,3/8"x3/8"FNPT
16	0418	1	Disconnect,Quick,Nipple,74Series,3/8"x3/8"FNPT
17	0569	48	FLANGE,SPLIT,C62
18	0621	8	O-Ring,N90-920,1.475"IDx0.118"Dia
19	0626	24	O-Ring,N90-222,1.484"IDx0.139"Dia
20	0968	8	Nut,Hex,1/2"-13UNC,Gr8,Pld
21	1497	4	Fitting,Hyd,Str,#6MJICx#6MORB
22	0982	16	Screw,Cap,Hex Hd,1/2"-13UNCx3-1/2",Gr8,Pld
23	0327	2	Fitting,Hyd,Str,#4FNPTx#6FJIC
24	720195	4	Nut,Hex,Lock,Spiralock,Flg,1/2"-13SPL,Gr8,Pld
25	0990	66	Screw,Cap,Hex Hd,1/2"-13UNCx2",Gr8,Pld
26	16535	1	Support,Flowmeters,Filter Manifold,D6P
27	0980	2	Screw,Cap,Hex Hd,1/2"-13UNCx1-3/4",Gr8,Pld
28	2085	8	Fitting,Pipe,Reducer,3000-psi,2"FNPTx1-1/4"FNPT
29	0151	8	Fitting,Pipe,2"Hose Endx2"MNPT,Pld
30	0708	16	Clamp,Hose,Constant Torque,2-1/2"
31	8726	23FT	Hose,Petroleum Suction/Dischrage,150 psi,2"
32	16534	1	Bracket,Support,Flowmeters,Filter Manifold,D6P
33	10775	8	Nut,Channel,1/2"-13UNC,W/Spring
34	16536	4	Bracket,Flowmeter Flange Support,D6P
35	3275	8	Adapter,Flow Meter,D6P

Parts List

Part # 730610

Drawing # I-730610

Rev. 2

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File # I-730610.xls

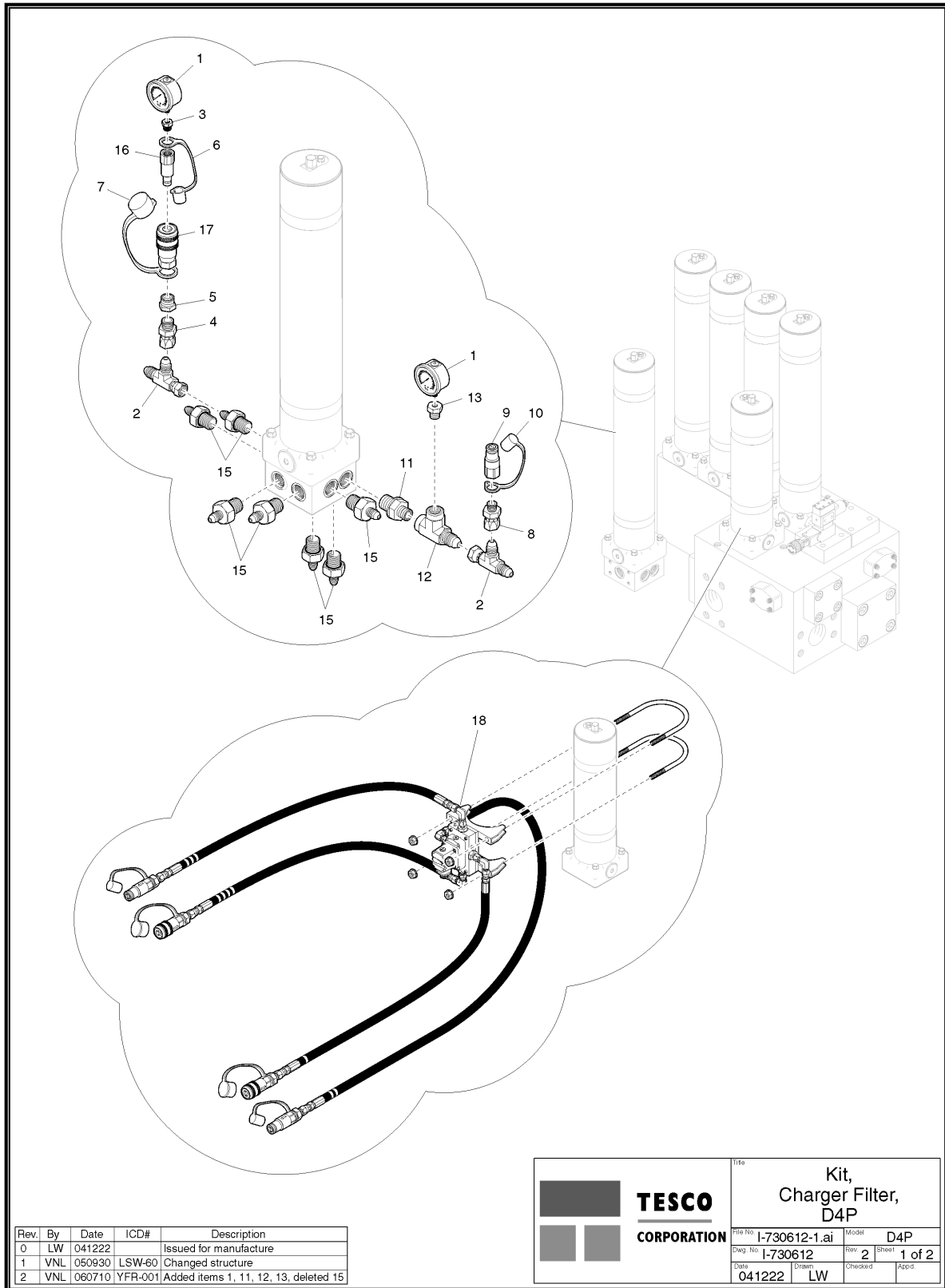
Refer: 2 Illustrations

Drawing Title: Kit,Filter Manifold & Pump Assy,D4P



Item #	Tesco #	Qty	Description
36	3324	2	Guard,Gauge,D4P/D6P
37	3460	1	Cap,Quick Disconnect,Nipple,74-Ser,3/8",Black
38	3461	1	Cap,Quick Disconnect,Coupler,74-Ser,3/8",Black
39	3568	4	Fitting,Hyd,90°Elb,#20MJICx#16-C61
40	3569	4	Fitting,Hyd,90°Elb,#12MJICx#12-C61
41	3575	4	Adapter,Split Flange,C62
42	5763	2	Gauge,Liq Filled,0-6000psi/kPa,2.5"ODx1/4"MNPT,LM
43	5881	70	Washer,Lock,Helical Spring,1/2",Alloy,Pld
44	6208	4	METER,REV FLW,OIL,BI-DIR,SS,5000PSI,100GPM,RD
45	730458	1	Switch,Temp,WP,80°F-205°F,SPDT
46	1073	4	Washer,Flat,Type A,Narrow,1/2",Hardened,Pld

Kit, Charger Filter, CAT3412, D4P



Parts List

Part # 730612

Drawing # I-730612

Rev. 2

Page 2 of 2

File # I-730612.xls

Refer: 1 Illustration

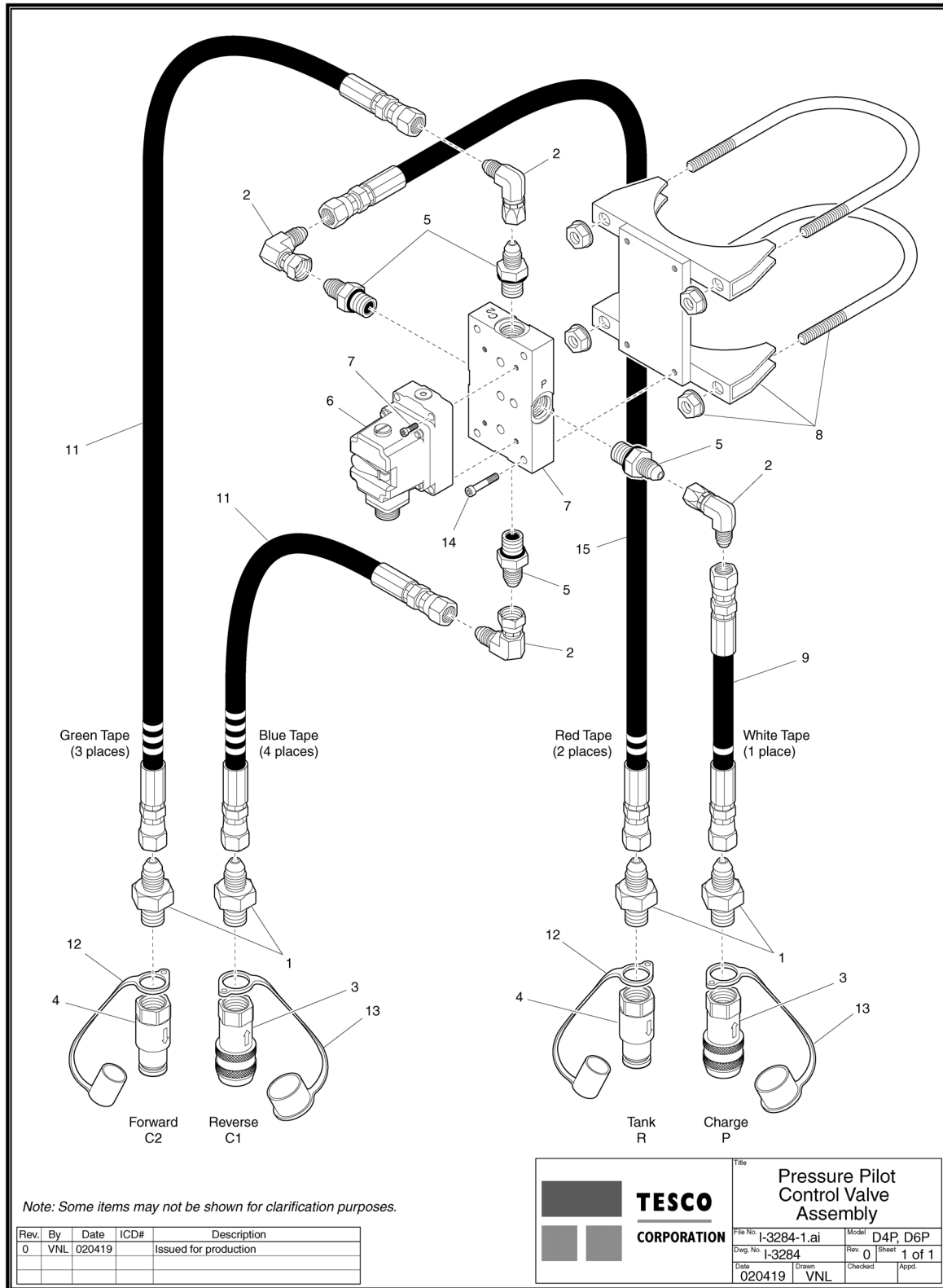
Drawing Title: Kit,Charger Filter,D4P



TESCO

Item #	Tesco #	Qty	Description
1	0049	2	Gauge, Liq Fill, 0-1000psi/kPa, 2.5"ODx1/4"MNPT, LM, R
2	0375	2	Fitting, Hyd, Tee, #12MJICx#12FJIC-Runx#12MJIC
3	12208	1	Fitting, Hyd, Str, #16MNPTx#4FNPT
4	0212	1	Fitting, Hyd, Str, #12MNPTx#12FJIC
5	0249	1	Fitting, Hyd, Str, #16MNPTx#12FNPT
6	0394	1	Cap, Quick Disconnect, Nipple, FF-Ser, 1", Black
7	0442	1	Cap, Quick Disconnect, Coupler, FF-Ser, 1", Black
8	6305	1	Fitting, Hyd, Str, #8MNPTx#12FJIC
9	0421	1	Disconnect, Quick, Nipple, 74Series, 3/8"x1/2"FNPT
10	3460	1	Cap, Quick Disconnect, Nipple, 74-Ser, 3/8", Black
11	12967	1	Fitting, Hyd, Str, #16MORBx#12MNPT
12	1120009	1	Fitting, Hyd, Tee, #12MJICx#12FNPTx#12FNPT
13	12201	1	Fitting, Hyd, Str, #12MNPTx#4FNPT
14			Not used
15	1492	7	Fitting, Hyd, Str, #12MJICx#16MORB
16	1989	1	Disconnect, Quick, Nipple, FF-Series, 1"x1"FNPT
17	1998	1	Disconnect, Quick, Coupler, FF-Series, 1"x1"FNPT
18	3284	1	ASSY, PRESS. PILOT, CNTRL. VALVE

ASSEMBLY, PRESSURE PILOT CONTROL VALVE





Parts List

Part # 3284

Drawing # I-3284 REV. 0

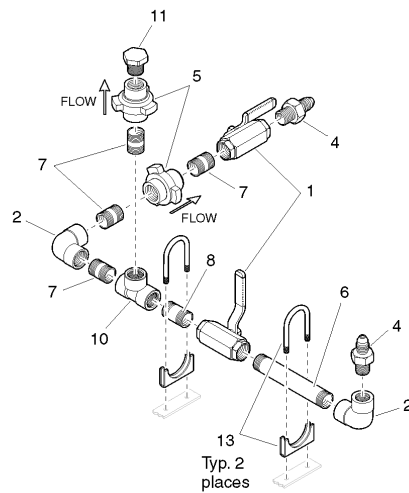
File # I-3284.xls

Refer: 1 Illustration


Drawing Title: Pressure Pilot Control Valve Assembly

Item #	Tesco #	Qty	Description
1	0292	4	FTG, HYD, STR, 3/8 MPT X 3/8 MJIC (1030-6-6)
2	0352	4	FTG, HYD, ELB, 90D, 3/8 MJIC X FJICSW (3293-6-6)
3	0411	2	COUPLING, HYD, FEM, 3/8", FF (74C6-6F)
4	0418	2	COUPLING, HYD, MALE, 3/8", FF (74N6-6F)
5	1501	4	FTG, HYD, STR, 1/2 MORB X 3/8 MJIC (3050-8-6)
6	2880	1	VALVE, PRESS. CONTROL PILOT (MCV116A3201)
7	2881	1	MANIFOLD, ADAPTOR, F/MCV116 VALVE (KK02501)
8	3280	1	ASSEMBLY, BRACKET, DIRECTIONAL PROPORTIONAL VALVE (13000150)
9	3426	1	HOSE, HYD, 2W, #6 X 80" W/FJIC
10			Not used
11	3425	2	HOSE, HYD, 2W, #6 X 90" W/FJIC
12	3460	2	CAP, HYD, #6 NIPPLE, 74SRS, FF (74PNC-6)
13	3461	2	PLUG, HYD, #6 CLPG, SRS, FF (74PCC-6)
14	3529	4	CAPSCREW, 1/4" X 1-1/4", UNC, SKT HD
15	3427	1	HOSE, HYD, 2W, #6 X 106" W/FJIC

Kit, Hot Oil Shuttle, CAT3412, D4P



Rev.	By	Date	ICD#	Description
0	LW	041222		Issued for manufacture
1	VNL	060710	YFR-001	Changed the Kit description

	Title		Kit, Hot Oil Shuttle, D4P	
	File No	I-730613-1.ai	Model	D4P
	Dwg No	I-730613	Rev	1
	Date	04/12/22	Drawn	LW
		Checked		App'd
				1 of 2

Parts List

Part # 730613

Drawing # I-730613

Rev. 1

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File # I-730613.xls

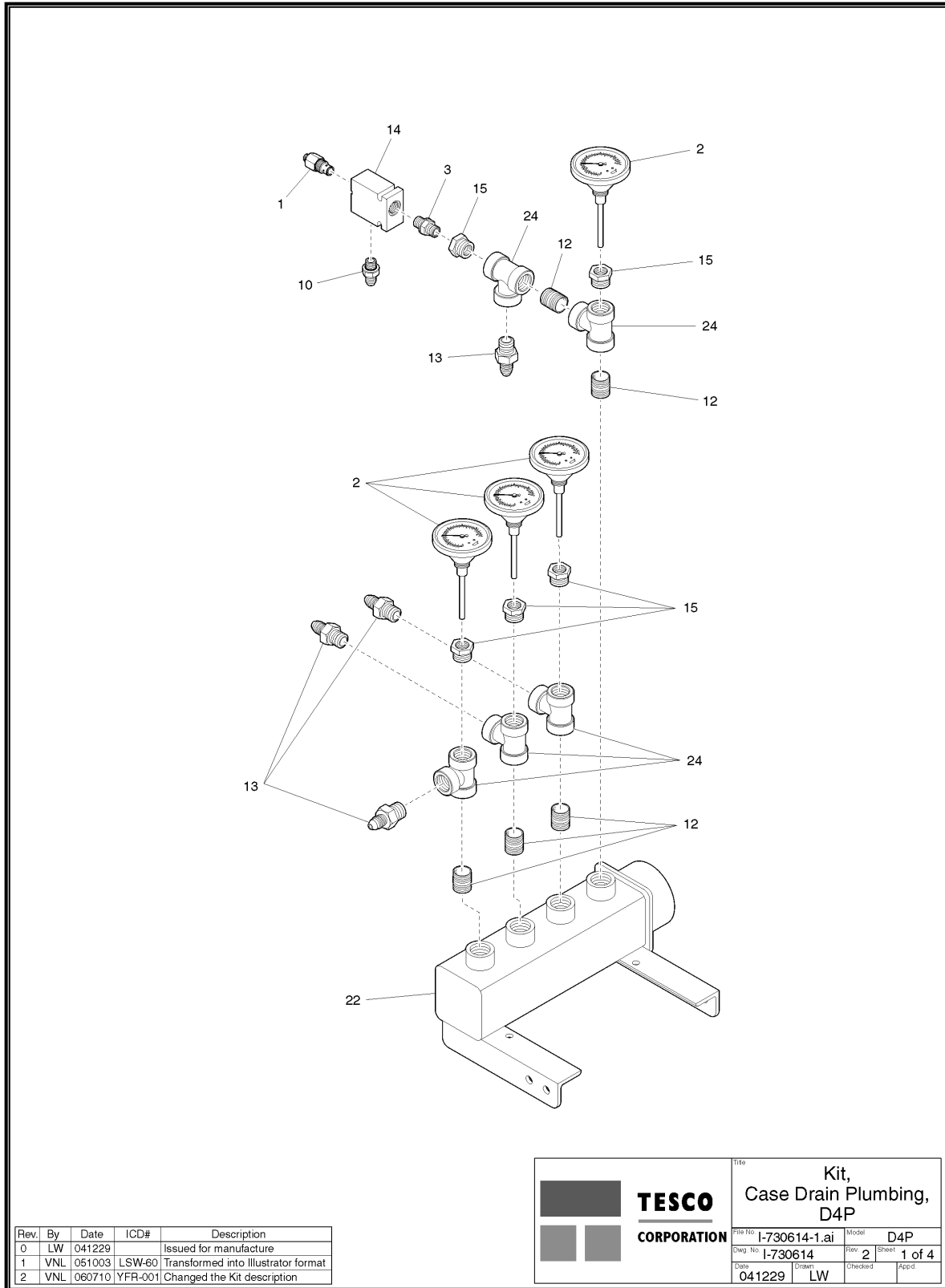
Refer: 1 Illustration

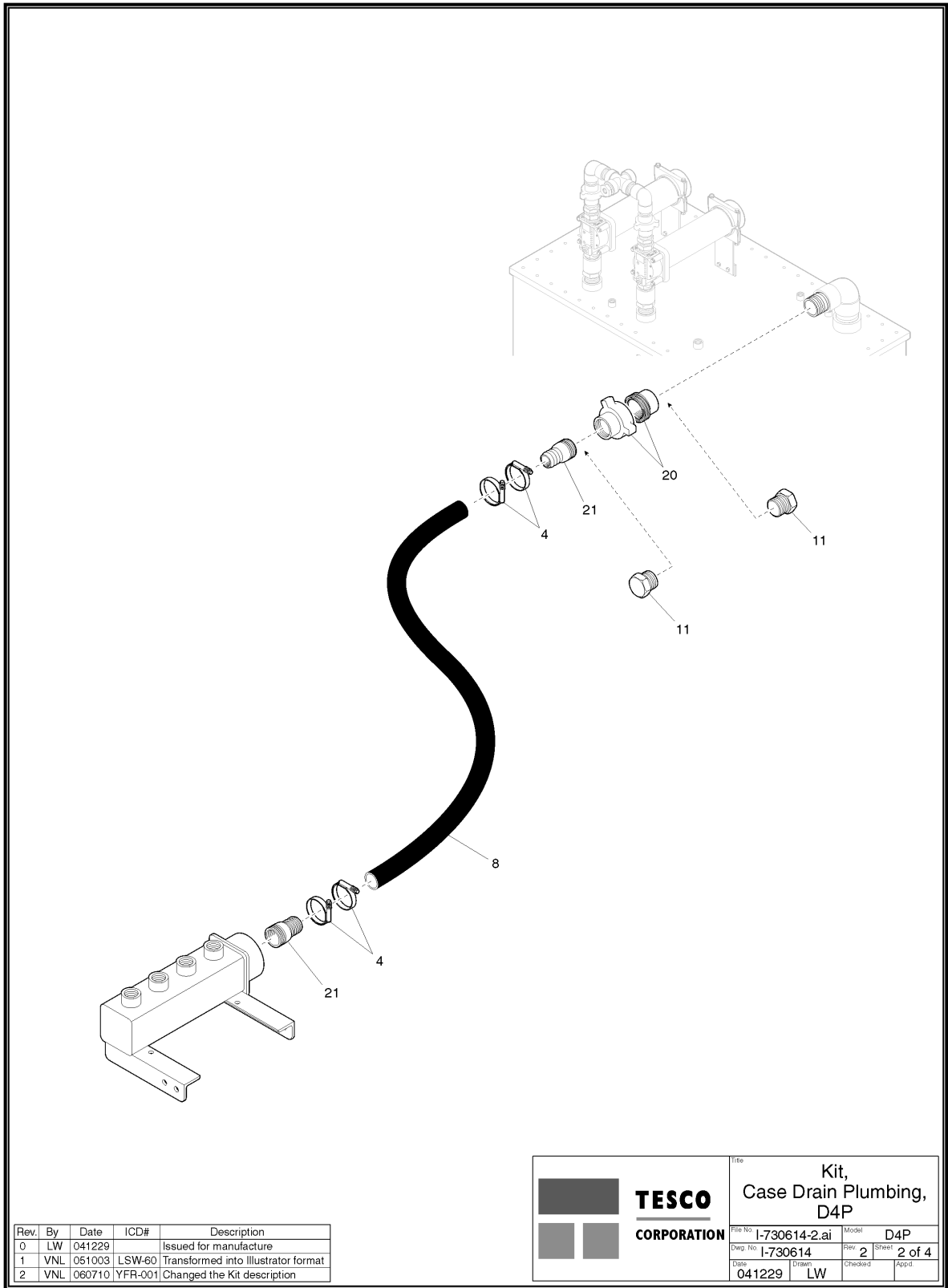
Drawing Title: Kit,Hot Oil Shuttle,D4P




Item #	Tesco #	Qty	Description
1	0008	2	VALVE,BALL,APOLO,1500#WP,1-1/4"
2	0129	2	ELBOW,PIPE,90 DEG,2000#,1-1/4"
3			Not used
4	0297	2	FTG,HYD,STR,1-1/4MPTX1-1/4MJIC
5	0531	2	UNION,HAMMER,THREAD,206,1-1/4"
6	1306	1	NIPPLE,THR,SCH80,1-1/4"X8"
7	1309	4	NIPPLE,THR,SCH80,1-1/4"X2-1/2"
8	1311	1	NIPPLE,THR,SCH80,1-1/4"X3"
9			Not used
10	1918	1	TEE,THR,2000#,NPT,1-1/4"
11	3004	1	PLUG,HEX,THR,FS,1-1/4"
12			Not used
13	6569	2	CLAMP,MUFFLER,1-3/4",BLUE

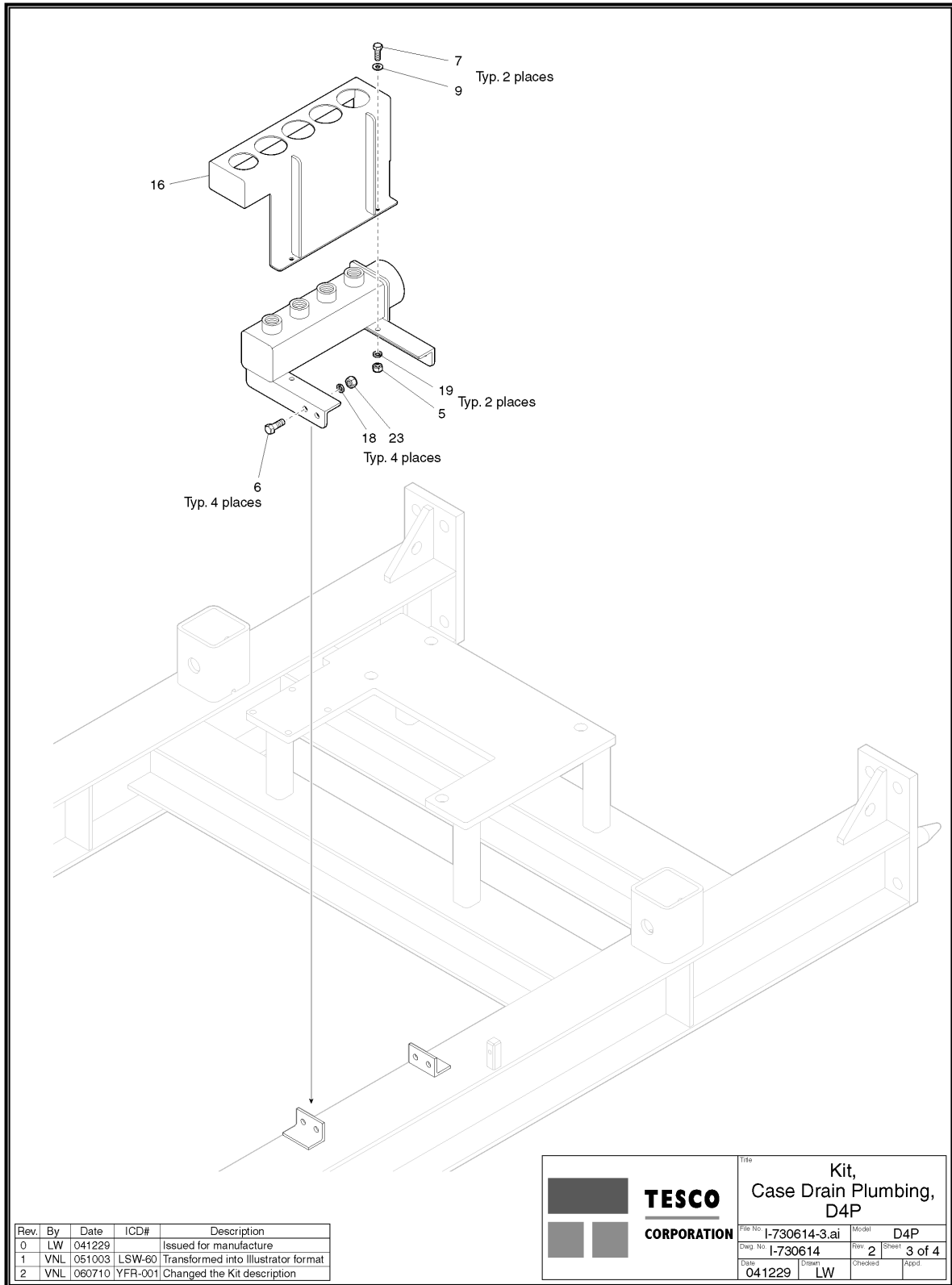
Kit, Case Drain Plumbing, CAT3412, D4P





Rev.	By	Date	ICD#	Description
0	LW	041229		Issued for manufacture
1	VNL	051003	LSW-60	Transformed into Illustrator format
2	VNL	060710	YFR-001	Changed the Kit description

	Kit, Case Drain Plumbing, D4P					
	File No	I-730614-2.ai	Model	D4P		
	Dwg No	I-730614	Rev	2	Sheet	2 of 4
	Date	041229	Drawn	LW	Checked	Appd.



Rev.	By	Date	ICD#	Description
0	LW	041229		Issued for manufacture
1	VNL	051003	LSW-60	Transformed into Illustrator format
2	VNL	060710	YFR-001	Changed the Kit description

		Title	
		Kit, Case Drain Plumbing, D4P	
File No.	Model		
I-730614-3.ai	D4P		
Dwg. No.	Rev.	Sheet	
I-730614	2	3 of 4	
Date	Drawn	Checked	App'd
041229	LW		

Parts List

Part # 730614

Drawing # I-730614

Rev. 2

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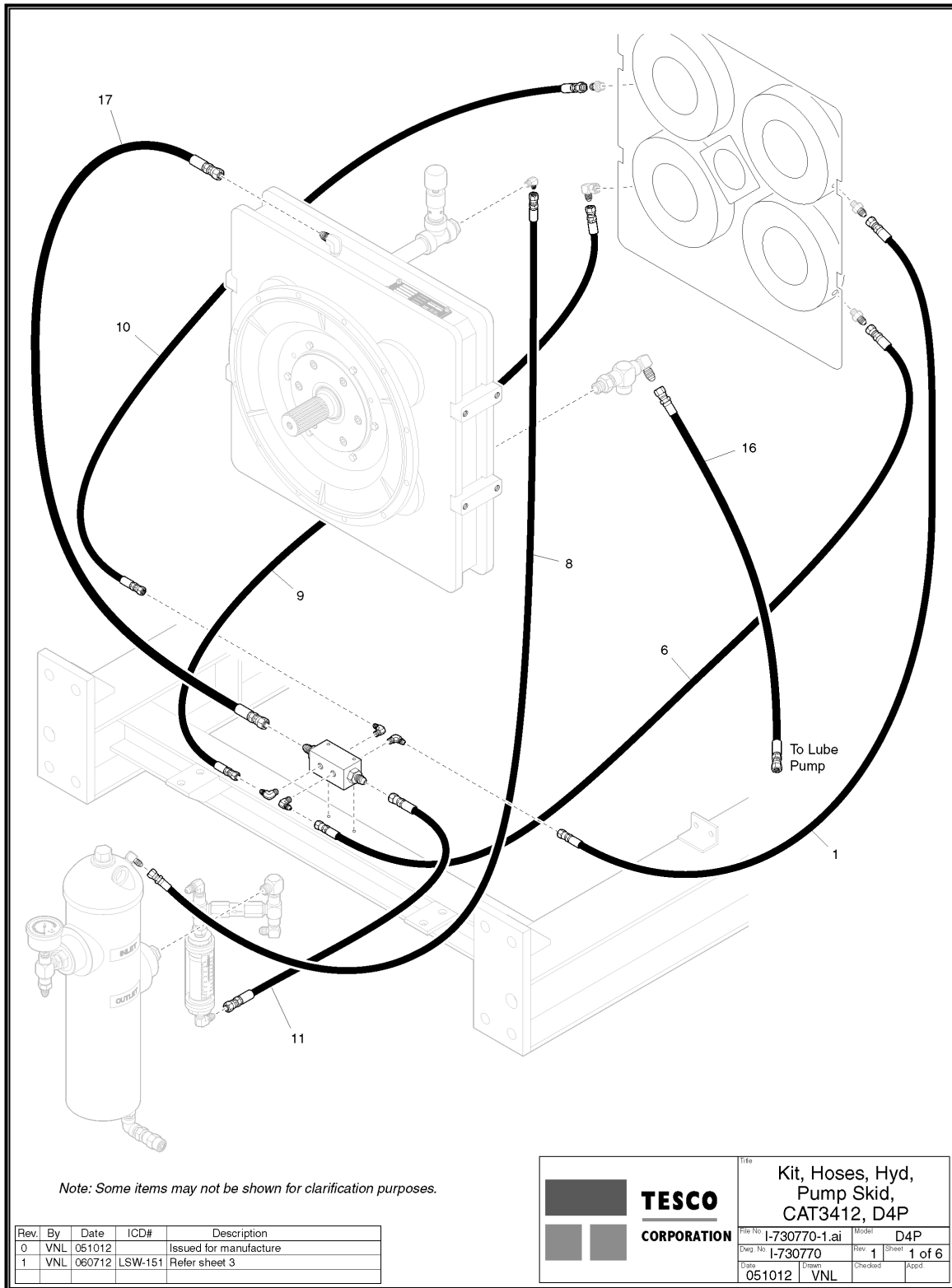
File # I-730614.xls

Refer: 3 Illustrations

Drawing Title: Kit,Case Drain Plumbing,D4P

Item #	Tesco #	Qty	Description
1	16245	1	VALVE,RELIEF,100-250 PSI,VENT/ ATMOSPHERE
2	0070	4	THERMOMETER,BIMETAL,0-250,1/2
3	0230	1	FTG,HYD,STR,1/2MORBX1/2MPT
4	0705	4	CLAMP,HOSE,CONST.TRQ,3-1/2"
5	0961	2	NUT,HEX,PLTD,NC,GR8,3/8"
6	0988	4	CAP,GR8,NC,PLT,1/2 X 1-1/4
7	1014	2	CAP,GR8,NC,PLT,3/8 X 1
8	10719	10.5 FT	HOSE,3"PETROLEUM TRANSFER 150P
9	13721	2	WASHER,FLAT,ALLOY,USS,3/8"
10	1502	1	FTG,HYD,STR,1/2MORBX1/2MJIC
11	1885	2	PLUG,PLASTIC,3",NPT,HEX
12	1300	5	Fitting,Pipe,Nipple,Sch80,1"MNPTxClose
13	0287	4	Fitting,Hyd,Str,#16MJICx#16MNPT
14	2021	1	BODY,CARTRIDGE,2 WAY,#8 SAE
15	0089	5	Fitting,Pipe,Bushing,Hex,1/2"FNPTx1"MNPT
16	3283	1	ASSY,GUARD,CASE DRAIN MAN.,CAT/DD
17			Not used
18	5881	4	WASHER,LOCK,ALLOY,PLTD,1/2"
19	7135	2	WASHER,LOCK,ALLOY,PLTD,3/8"
20	8211	1	UNION,HAMMER,THD,SEAL,206-3"
21	8793	2	NIPPLE,KING COMB.PLTD,THR.3"
22	3276	1	MANIFOLD,CASE DRAIN,D4P,CAT,BARE
23	9784	4	LOCKNUT,NYLON,PLTD,NC,GR8,1/2"
24	0170	5	Fitting,Pipe,Tee,2000-psi,1",FNPT

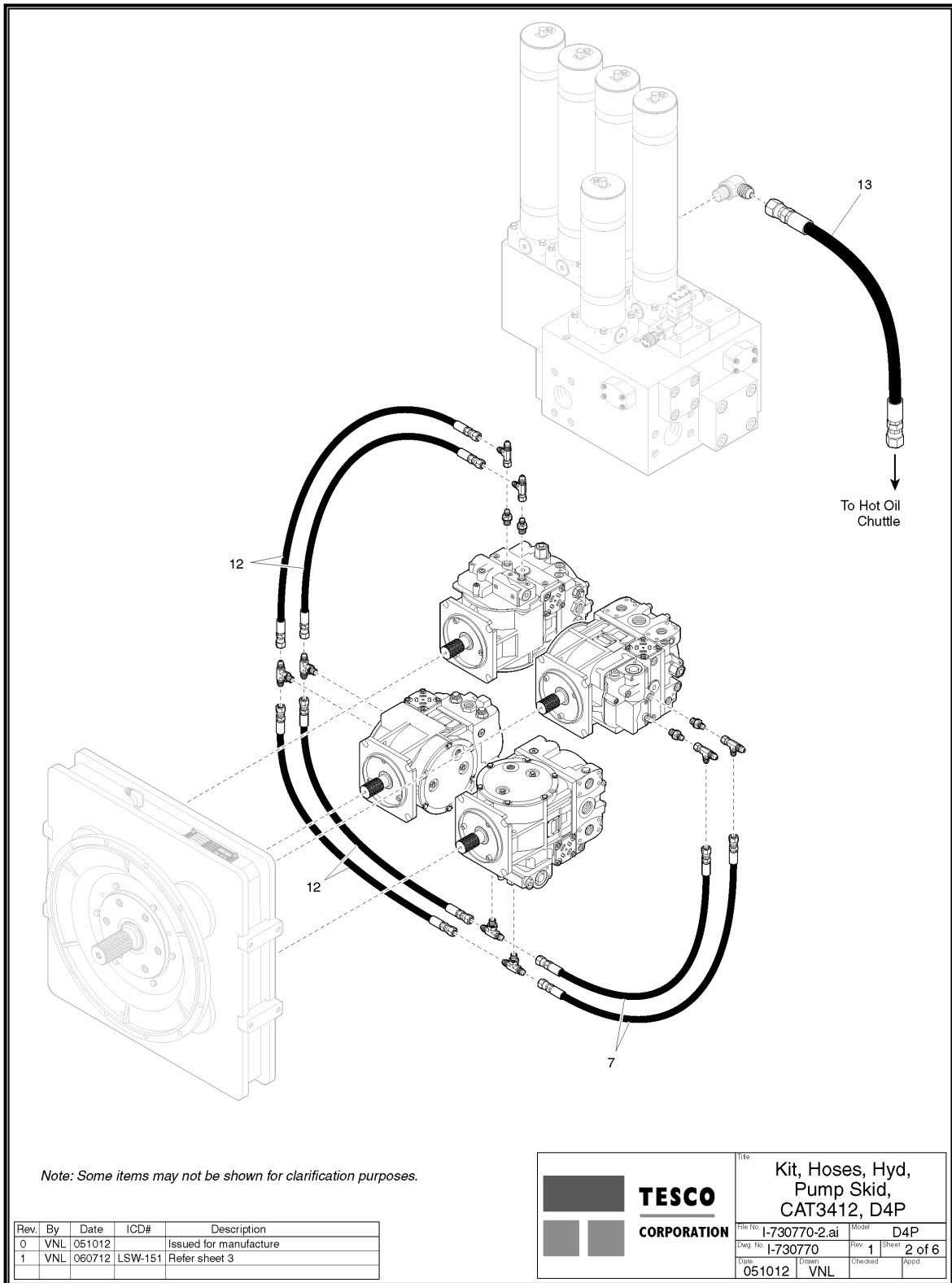
KIT, HOSES, HYD, PUMP SKID, CAT3412, D4P

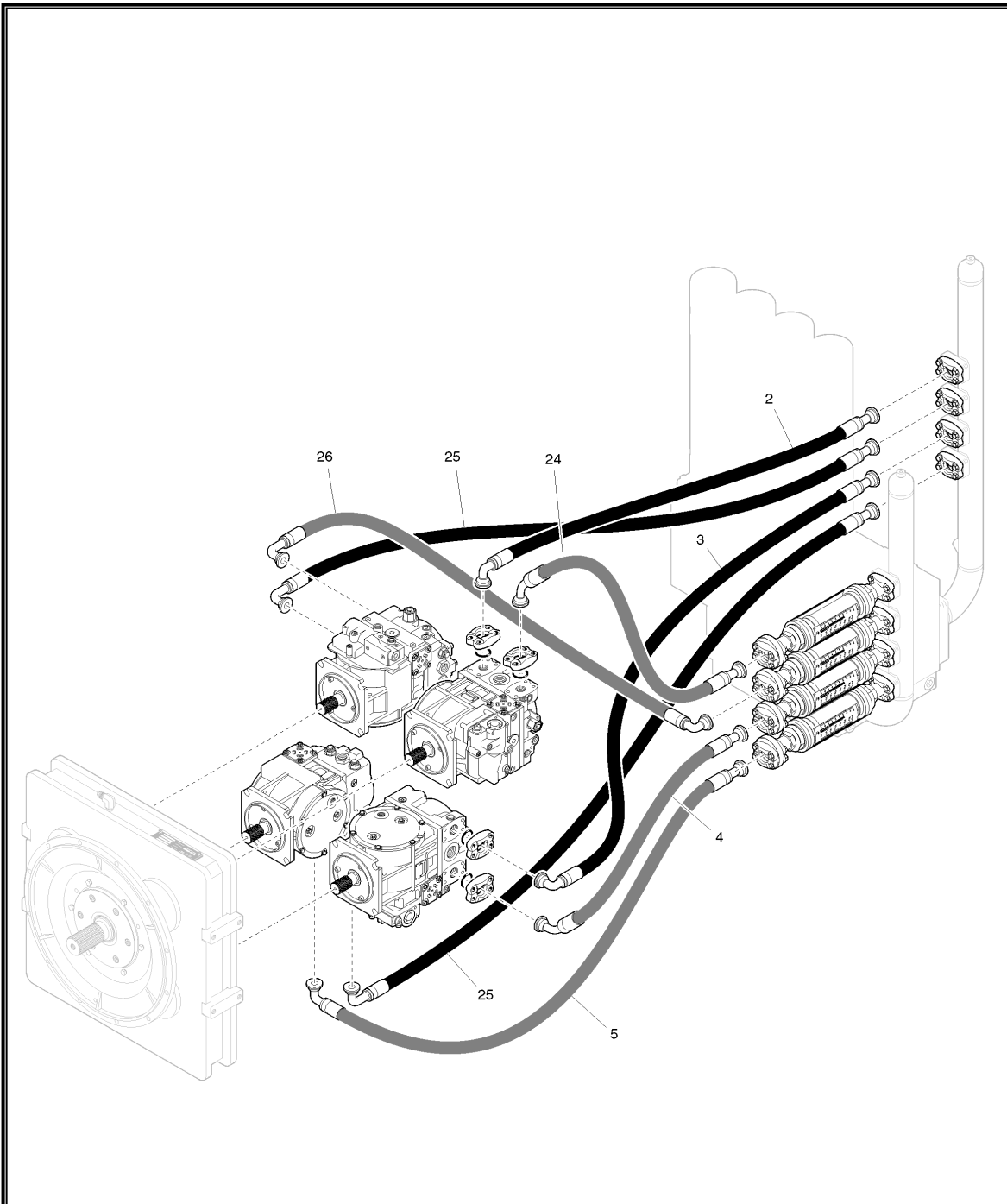


Note: Some items may not be shown for clarification purposes.

Rev.	By	Date	ICD#	Description
0	VNL	051012		Issued for manufacture
1	VNL	060712	LSW-151	Refer sheet 3

		Title	
		Kit, Hoses, Hyd, Pump Skid, CAT3412, D4P	
File No		Model	
I-730770-1.ai		D4P	
Dwg. No		Rev	
I-730770		1	
Date		Sheet	
051012		1 of 6	
Drawn		Checked	
VNL		Appd.	

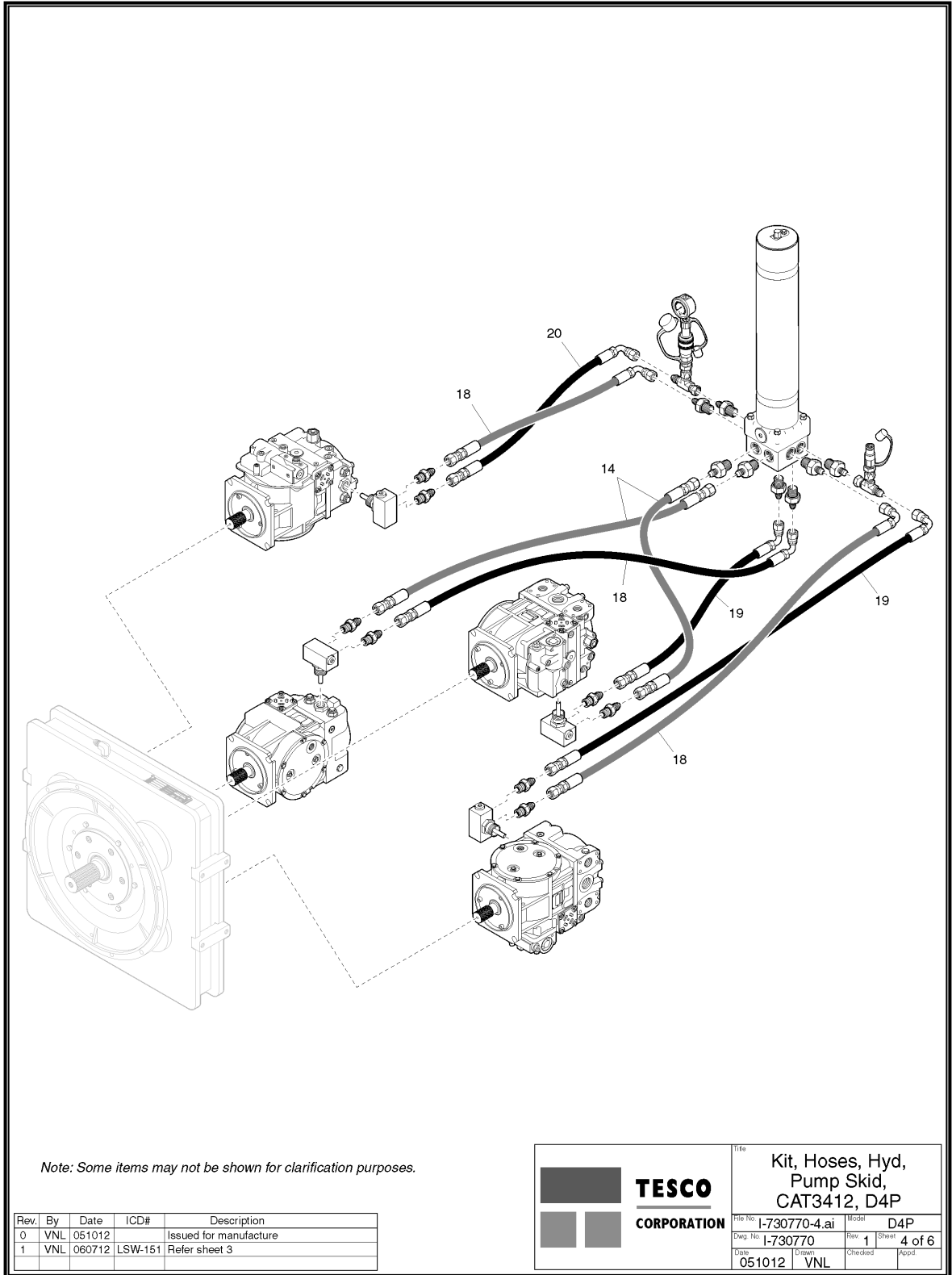




Note: Some items may not be shown for clarification purposes.

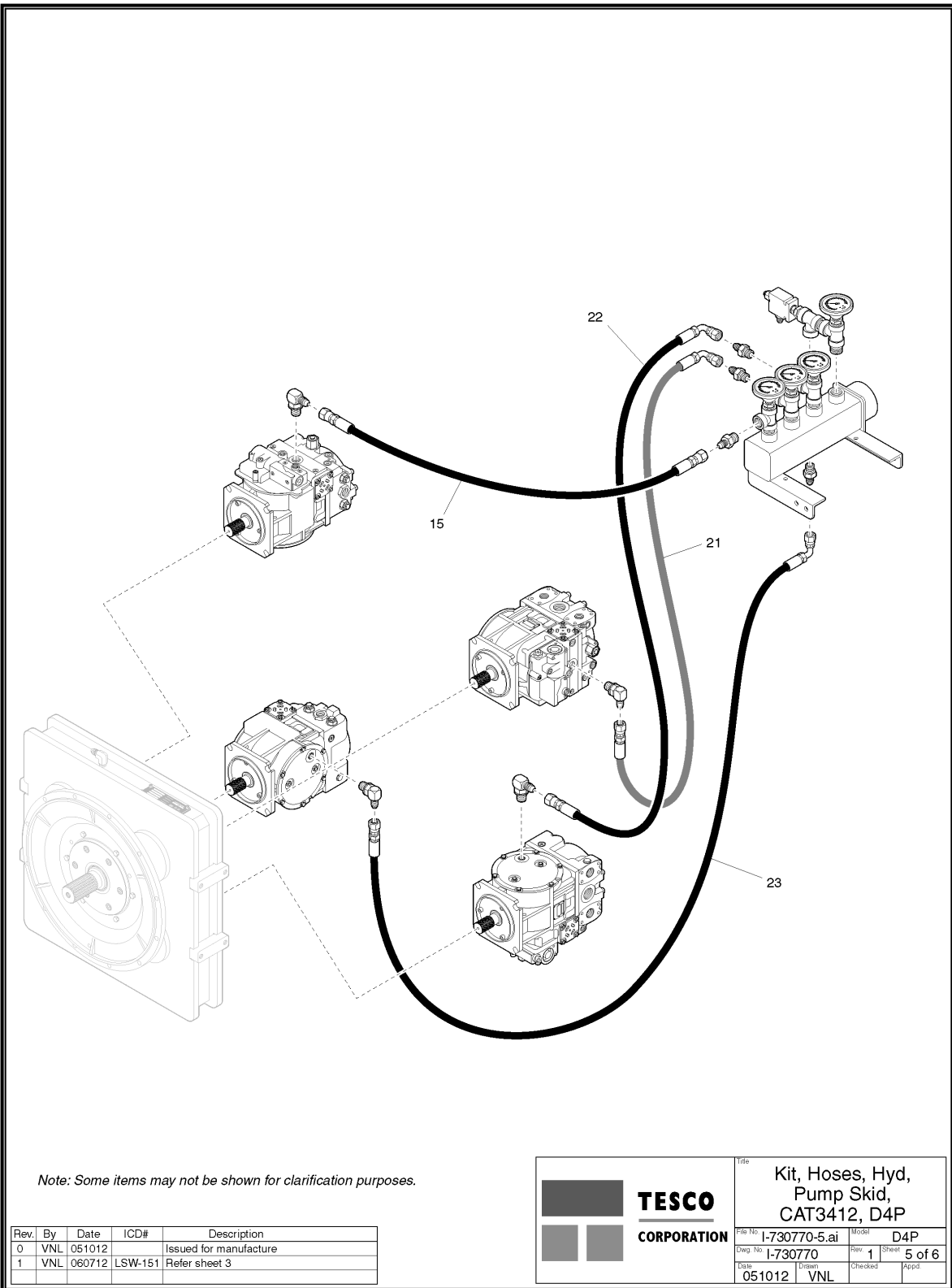
Rev.	By	Date	ICD#	Description
0	VNL	051012		Issued for manufacture
1	VNL	060712	LSW-151	Corrected hoses routing

		Title Kit, Hoses, Hyd, Pump Skid, CAT3412, D4P	
		File No. I-730770-3.ai	Model D4P
Draw. No. I-730770	Rev. 1	Sheet 3 of 6	Appd.
Date 051012	Drawn VNL	Checked	Appd.



Rev.	By	Date	ICD#	Description
0	VNL	051012		Issued for manufacture
1	VNL	060712	LSW-151	Refer sheet 3

		Title Kit, Hoses, Hyd, Pump Skid, CAT3412, D4P	
		P/N I-730770-4.ai	Model D4P
Date 051012		Drawn VNL	Rev 1 Sheet 4 of 6
		Checked	Appd



Parts List



Part # 730770

Drawing # I-730770

Rev. 1

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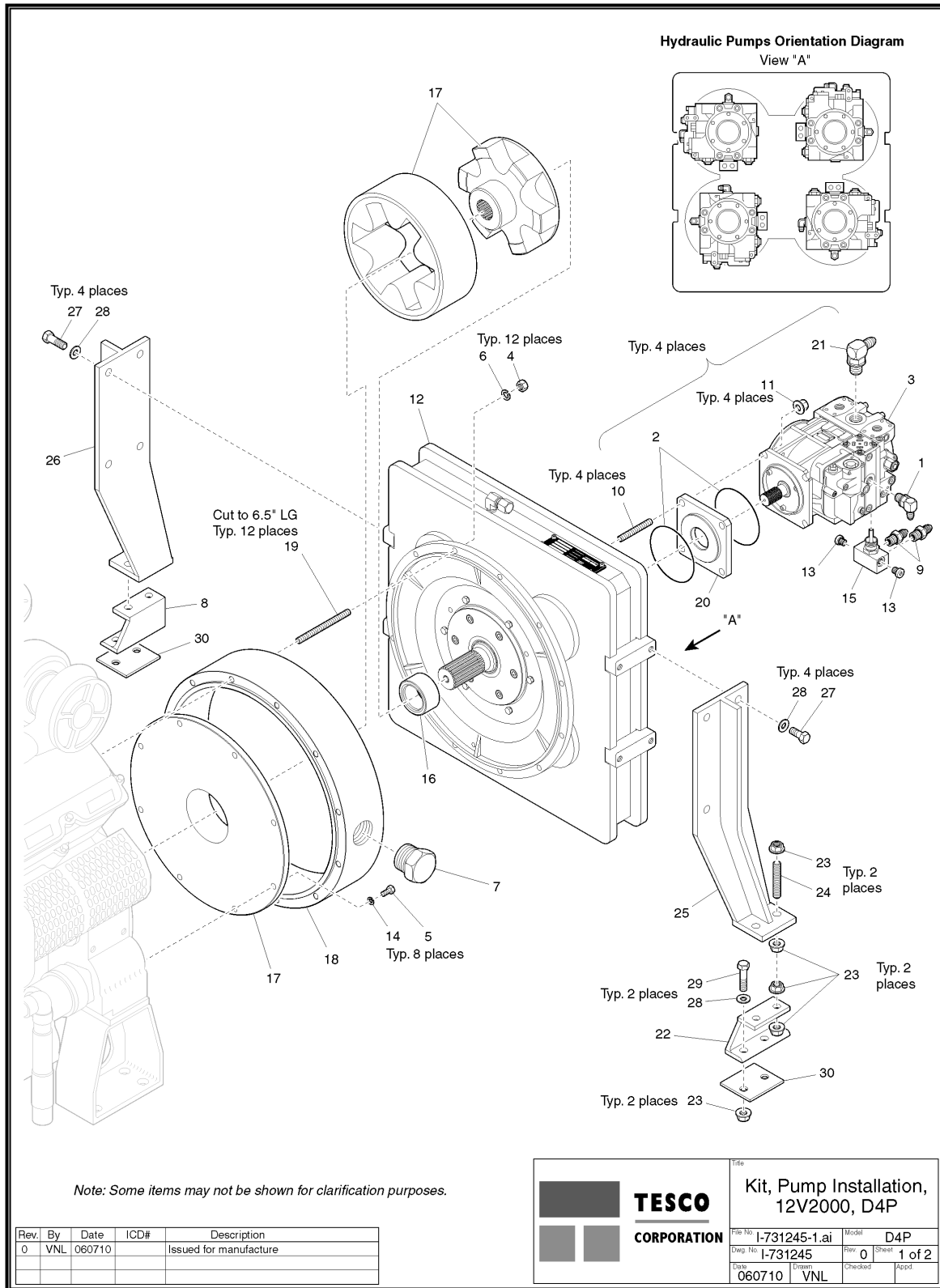
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Refer: 5 Illustrations

Drawing Title: Kit,Hoses,Hyd,Pump Skid,CAT 3412,D4P

Item #	Tesco #	Qty	Description
1	11306	1	Hose,Hyd,100R2-AT,#4x38",FJICxFJIC
2	16700	1	Hose,Hyd,100R13,#20x75",FLGx90°FLG,C62
3	16728	1	Hose,Hyd,100R13,#20x83",FLGx90°FLG,C62
4	16731	1	Hose,Hyd,100R13,#20x44.5",FLGx45°FLG,C62
5	16737	1	Hose,Hyd,100R13,#20x65",FLGx90°FLG,C62
6	3710	1	Hose,Hyd,100R2-AT,#4x26",FJICxFJIC
7	3716	4	Hose,Hyd,100R2-AT,#6x28",FJICxFJIC
8	4582	1	Hose,Hyd,100R2-AT,#4x120",FJICxFJIC
9	5435	1	Hose,Hyd,100R2-AT,#4x18",FJICxFJIC
10	5437	1	Hose,Hyd,100R2-AT,#4x36",FJICxFJIC
11	5446	1	Hose,Hyd,100R2-AT,#8x70",FJICxFJIC
12	5461	4	Hose,Hyd,100R2-AT,#6x26",FJICxFJIC
13	5517	1	Hose,Hyd,100R2-AT,#20x23",FJICxFJIC
14	5882	2	Hose,Hyd,100R2-AT,#12x48",FJICxFJIC
15	7117	1	Hose,Hyd,100R2-AT,#16x52",FJICxFJIC
16	7278	1	Hose,Hyd,100R2-AT,#12x105",FJICxFJIC
17	730758	1	Hose,Hyd,100R2-AT,#12x55",FJICxFJIC
18	730759	3	Hose,Hyd,100R2-AT,#12x50",FJICx90°FJIC
19	730760	2	Hose,Hyd,100R2-AT,#12x53",FJICx90°FJIC
20	730761	1	Hose,Hyd,100R2-AT,#12x56",FJICx90°FJIC
21	730762	1	Hose,Hyd,100R2-AT,#16X41",FJICx90°FJIC
22	730763	1	Hose,Hyd,100R2-AT,#16X48",FJICx90°FJIC
23	730764	1	Hose,Hyd,100R2-AT,#16X52",FJICx90°FJIC
24	730765	1	Hose,Hyd,100R13,#20x51",FLGx45°FLG,C62
25	730766	2	Hose,Hyd,100R13,#20x89",FLGx90°FLG,C62
26	730767	1	Hose,Hyd,100R13,#20x66",90°FLGx90°FLG,C62

KIT, PUMP INSTALLATION, 12V2000, D4P



Parts List



Part # 731245

Drawing # I-731245

Rev. 0

Page 2 of 2

File # I-731245.xls

Refer: 1 Illustration

Drawing Title: Kit,Pump Installation,12V2000,D4P

Item #	Tesco #	Qty	Description
1	0195	6	Fitting,Hyd,90°Elb,#16MJICx#16MORB
2	0593	8	O-Ring,N70-365,6.975"IDx0.210"Dia
3	0934	4	Pump,Hyd,CCW,7.93 cu-in/rev,4640-psi,(Sundstrand)
4	731248	12	Nut,Hex,M10,Class 10.9
5	0983	16	Screw,Cap,Hex Hd,1/2"-13UNCx1-1/2",Gr8,Pld
6	10633	12	Washer,Lock,Helical Spring,7/16",Alloy,Pld
7	12102	4	Fitting,Hyd,Plug,Hex Hd,2"MNPT
8	800079	1	Bracket,Mounting,RH,Pump Drive,D4P
9	1495	8	Fitting,Hyd,Str,#12MJICx#10MORB
10	15790	16	Stud,Threaded,3/4"-10UNCx3-1/2",A-193 B7
11	19218	16	Nut,Hex,Lock,Spirallock,Flg,3/4"-10SPL,Gr8,Pld
12	3203	1	ASSY,PUMP DRIVE,1:1.18 RATIO,D4P
13	5128	8	Fitting,Hyd,Plug,Skt Hd,#6MORB
14	5881	16	Washer,Lock,Helical Spring,1/2",Alloy,Pld
15	590200	4	Adaptor,Charge Filter Assy,Sundstrand Ser 90
16	730623	1	Spacer,Atraflex M6 Coupling,CAT3412,D4P
17	730625	1	Coupling,Flywheel Atraflex M6,Splined,CAT3412,D4P
18	730626	1	Spacer,Atraflex M6 Housing,CAT3412,D4P
19	731246	3	Rod,Thr,M10x1M,Class 10.9
20	7474	4	PLATE,ADAPTER,SUNDSTRAND PUMP
21	0194	4	Fitting,Hyd,90°Elb,#20MJICx#20MORB
22	800080	1	Bracket,Mounting,LH,Pump Drive,D4P
23	460188	20	Nut,Hex,Lock,Spirallock,Flg,5/8"-11SPL,Gr8,Pld
24	460189	4	Stud,Threaded,5/8"-11UNCx4-1/2",A-193 B7
25	3277	1	LEG,LEFT HAND,4 PUMP
26	3278	1	LEG,RIGHT HAND,4 PUMP
27	1016	8	Screw,Cap,Hex Hd,5/8"-11UNCx1-1/2",Gr8,Pld
28	9232	12	Washer,Flat,Type A,Narrow,5/8",Hardened,Pld
29	1017	4	Screw,Cap,Hex Hd,5/8"-11UNCx3",Gr8,Pld
30	3325	2	Packing,Pump Drive,1/4"thk,RS-4,D4P/D6P

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PUMPDRIVE, 1:1.18 RATIO, D4P

ELEVATION - PUMP SIDE

END ELEVATION

ELEVATION - ENGINE SIDE

A - A

B - B

C - C

SIGHT GLASS DETAIL

OUTLINE OF PUMPDRIVE SUPPORT BRACKET (REF)

TYPE D MOUNTING FLANGE - 4 BOLT

EXTERNAL SPLINE 10/20 20T 30° SIDE FIT FILLET ROOT

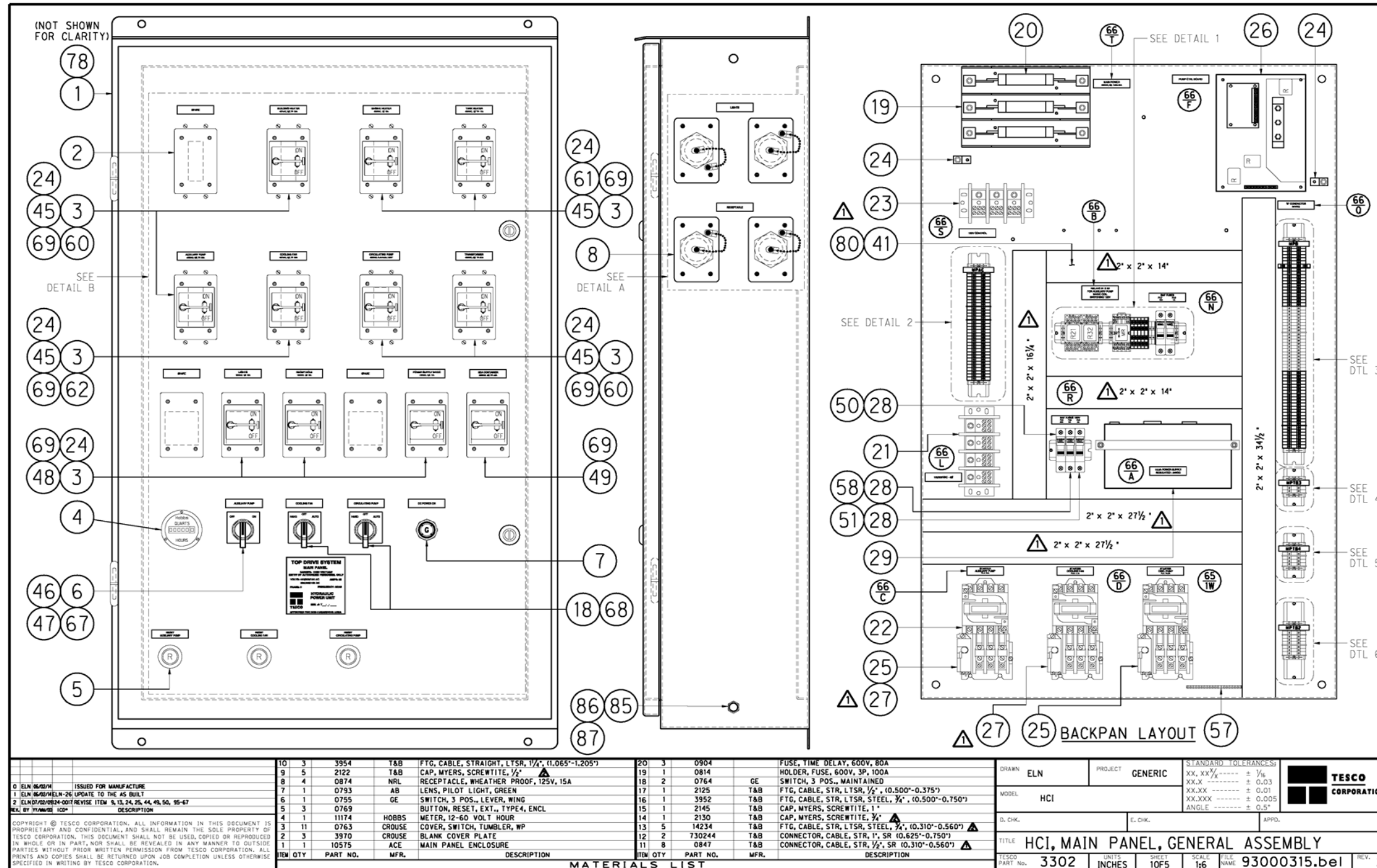
SAE TYPE A MTG FLG 2 BOLT

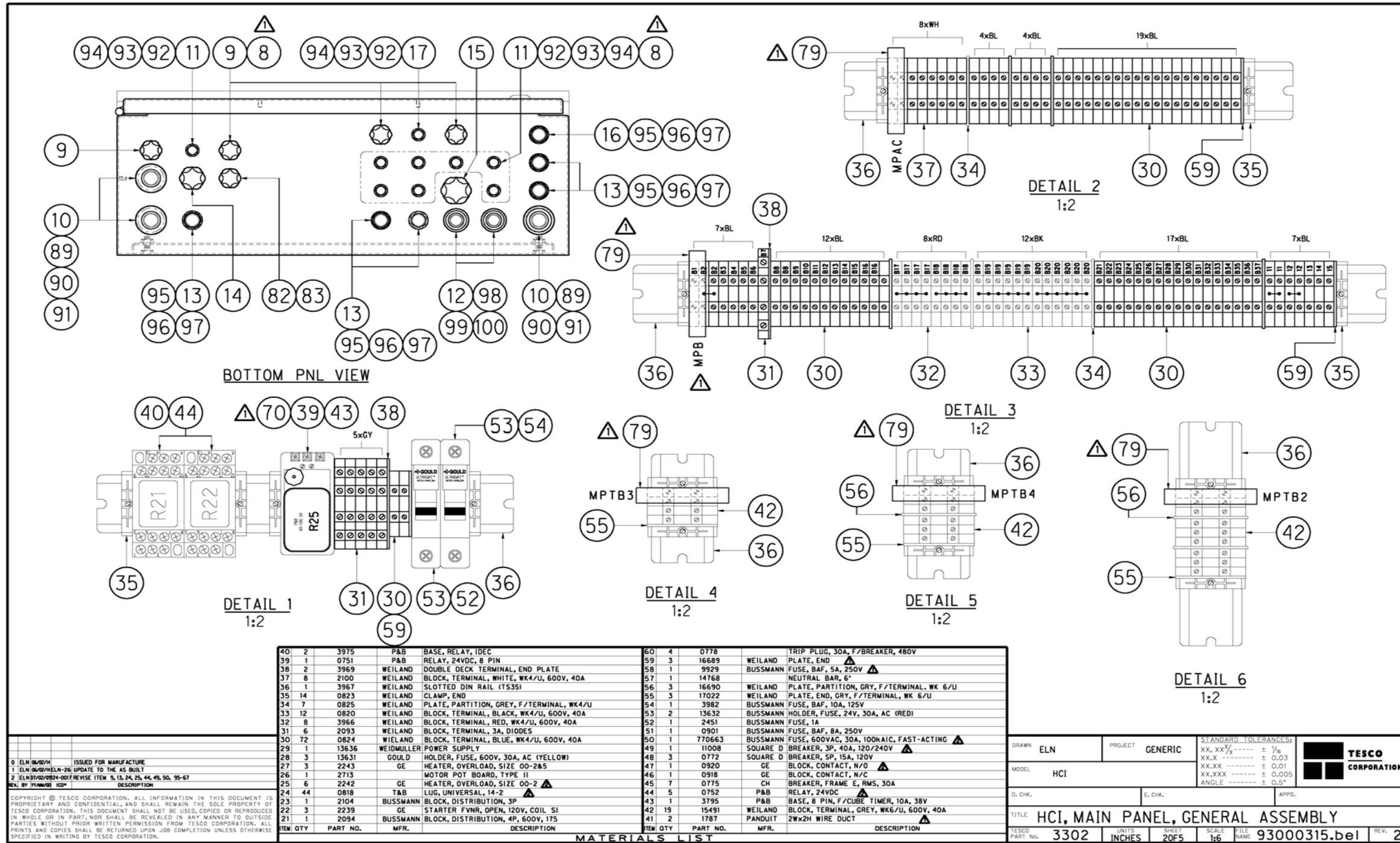
NOTES:
 1. USE LOCTITE 515 FOR GASKET BETWEEN LID AND DRIVE BODY.

ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
4	1	0403	FITTING, HYD. CAP, 1/2" NPT, RTRN	16	8	0864	RING, SNAP TRU 8000-433, INTERNAL	24	1	0905	O-RING, N70-387, 6.478" ID x 0.210" DIA
5	1	0404	FITTING, HYD. CAP, 1/2" NPT, RTRN	17	8	0865	RING, SNAP TRU 5100-188, EXTERNAL	25	1	0922	O-RING, N70-381, 4.728" ID x 0.210" DIA
6	1	0405	FITTING, HYD. CAP, 1/2" NPT, RTRN	18	8	0866	RING, SNAP TRU 5100-188, EXTERNAL	26	1	0923	O-RING, N70-381, 4.728" ID x 0.210" DIA
7	1	0406	FITTING, HYD. CAP, 1/2" NPT, RTRN	19	8	0867	RING, SNAP TRU 5100-188, EXTERNAL	27	1	0924	O-RING, N70-381, 4.728" ID x 0.210" DIA
8	1	0407	FITTING, HYD. CAP, 1/2" NPT, RTRN	20	1	0948	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	28	2	1000	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
9	1	0408	FITTING, HYD. CAP, 1/2" NPT, RTRN	21	1	0949	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	29	1	1001	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
10	1	0409	FITTING, HYD. CAP, 1/2" NPT, RTRN	22	1	0950	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	30	1	1002	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
11	1	0410	FITTING, HYD. CAP, 1/2" NPT, RTRN	23	1	0951	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	31	1	1003	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
12	1	0411	FITTING, HYD. CAP, 1/2" NPT, RTRN	24	1	0952	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	32	1	1004	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
13	1	0412	FITTING, HYD. CAP, 1/2" NPT, RTRN	25	1	0953	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	33	1	1005	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
14	1	0413	FITTING, HYD. CAP, 1/2" NPT, RTRN	26	1	0954	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	34	1	1006	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
15	1	0414	FITTING, HYD. CAP, 1/2" NPT, RTRN	27	1	0955	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	35	1	1007	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
16	1	0415	FITTING, HYD. CAP, 1/2" NPT, RTRN	28	1	0956	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	36	1	1008	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
17	1	0416	FITTING, HYD. CAP, 1/2" NPT, RTRN	29	1	0957	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	37	1	1009	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
18	1	0417	FITTING, HYD. CAP, 1/2" NPT, RTRN	30	1	0958	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	38	1	1010	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
19	1	0418	FITTING, HYD. CAP, 1/2" NPT, RTRN	31	1	0959	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	39	1	1011	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
20	1	0419	FITTING, HYD. CAP, 1/2" NPT, RTRN	32	1	0960	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	40	1	1012	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
21	1	0420	FITTING, HYD. CAP, 1/2" NPT, RTRN	33	1	0961	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	41	1	1013	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
22	1	0421	FITTING, HYD. CAP, 1/2" NPT, RTRN	34	1	0962	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	42	1	1014	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
23	1	0422	FITTING, HYD. CAP, 1/2" NPT, RTRN	35	1	0963	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	43	1	1015	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
24	1	0423	FITTING, HYD. CAP, 1/2" NPT, RTRN	36	1	0964	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	44	1	1016	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
25	1	0424	FITTING, HYD. CAP, 1/2" NPT, RTRN	37	1	0965	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	45	1	1017	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
26	1	0425	FITTING, HYD. CAP, 1/2" NPT, RTRN	38	1	0966	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	46	1	1018	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
27	1	0426	FITTING, HYD. CAP, 1/2" NPT, RTRN	39	1	0967	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	47	1	1019	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
28	1	0427	FITTING, HYD. CAP, 1/2" NPT, RTRN	40	1	0968	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	48	1	1020	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
29	1	0428	FITTING, HYD. CAP, 1/2" NPT, RTRN	41	1	0969	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	49	1	1021	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
30	1	0429	FITTING, HYD. CAP, 1/2" NPT, RTRN	42	1	0970	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)	50	1	1022	WASHER, LOCK, HELICAL SPRING, 3/8" ALLOY, PLD
31	1	0430	FITTING, HYD. CAP, 1/2" NPT, RTRN	43	1	0971	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
32	1	0431	FITTING, HYD. CAP, 1/2" NPT, RTRN	44	1	0972	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
33	1	0432	FITTING, HYD. CAP, 1/2" NPT, RTRN	45	1	0973	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
34	1	0433	FITTING, HYD. CAP, 1/2" NPT, RTRN	46	1	0974	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
35	1	0434	FITTING, HYD. CAP, 1/2" NPT, RTRN	47	1	0975	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
36	1	0435	FITTING, HYD. CAP, 1/2" NPT, RTRN	48	1	0976	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
37	1	0436	FITTING, HYD. CAP, 1/2" NPT, RTRN	49	1	0977	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
38	1	0437	FITTING, HYD. CAP, 1/2" NPT, RTRN	50	1	0978	SEAL, NATIONAL, FN PUMP DRIVE, 2 x 6-1/4 (80020008)				
39	1	0438	FITTING, HYD. CAP, 1/2" NPT, RTRN								
40	1	0439	FITTING, HYD. CAP, 1/2" NPT, RTRN								
41	1	0440	FITTING, HYD. CAP, 1/2" NPT, RTRN								
42	1	0441	FITTING, HYD. CAP, 1/2" NPT, RTRN								
43	1	0442	FITTING, HYD. CAP, 1/2" NPT, RTRN								
44	1	0443	FITTING, HYD. CAP, 1/2" NPT, RTRN								
45	1	0444	FITTING, HYD. CAP, 1/2" NPT, RTRN								
46	1	0445	FITTING, HYD. CAP, 1/2" NPT, RTRN								
47	1	0446	FITTING, HYD. CAP, 1/2" NPT, RTRN								
48	1	0447	FITTING, HYD. CAP, 1/2" NPT, RTRN								
49	1	0448	FITTING, HYD. CAP, 1/2" NPT, RTRN								
50	1	0449	FITTING, HYD. CAP, 1/2" NPT, RTRN								

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PANEL, MAIN CONTROL D4P/D6P





NOTE: MAIN ITEM NUMBER IN PRESENT DWG
 SUB ITEM TO SHOWN TAGS LOCATION
 (REF: DWG 93000906, 93000907, IN# 16364, 16365)

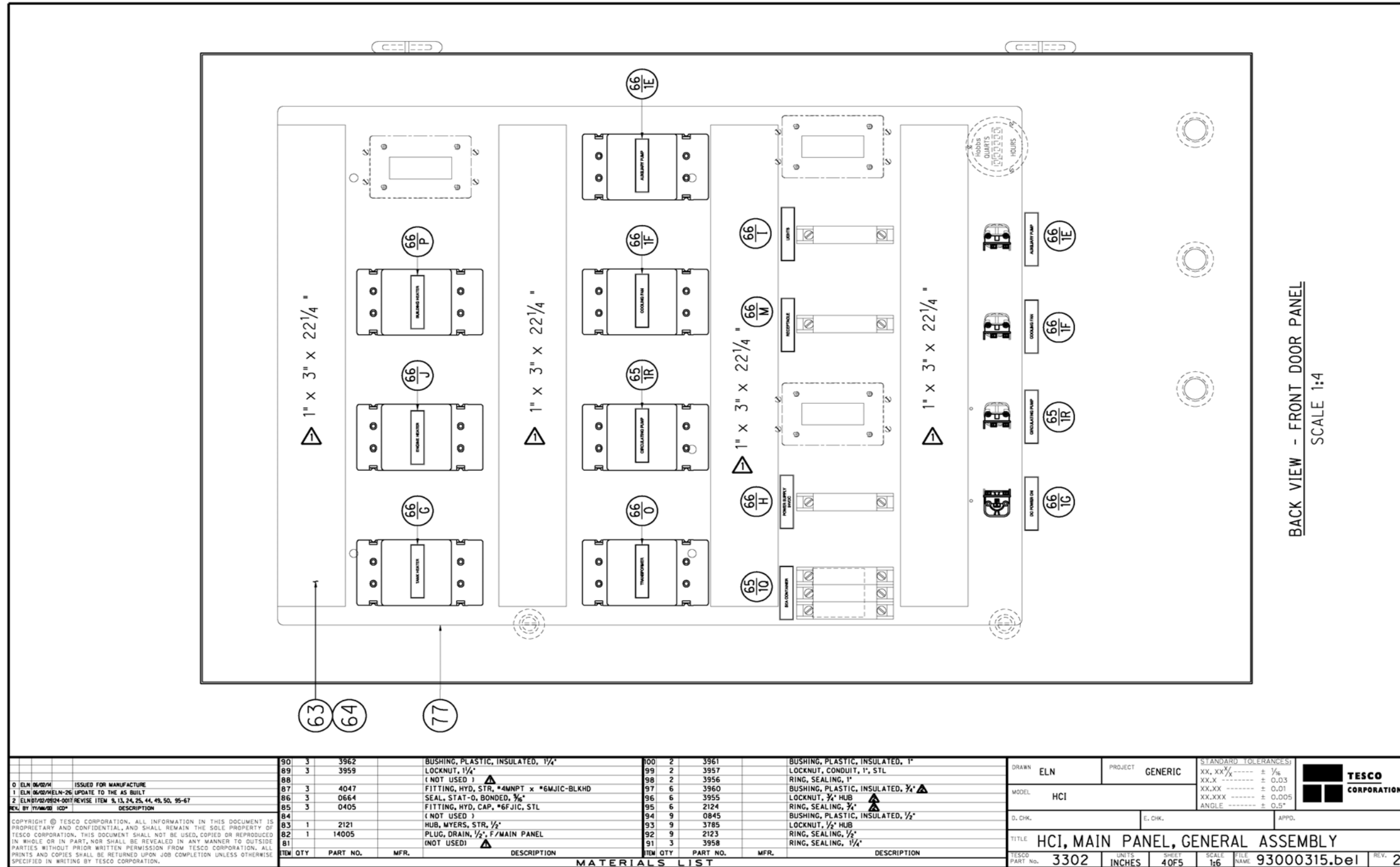
DETAIL A
SCALE 1:4

DETAIL B - FRONT DOOR PANEL
SCALE 1:4

ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
70	1	3796		CUBE, TIMER, 20-65V, 2 FORM C, 8P, 0.2-30 MIN.	80	2	1786	PANDUIT	COVER, 2"x2" WIRING DUCT
69	11	14825		GASKET, BOX, ELEC., CONDUIT, FS/FD	79	5	14779	WEILAND	LABEL CARRIER
68	2	10815		LEGEND, "HAND-OFF-AUTO", F/SWITCH, 30.5mm	78	1	16355		COVER, BACKPAN, LEXAN, MAIN PANEL (91000911)
67	1	14613		LEGEND, "OFF-ON", F/SWITCH, 30.5mm	77	1	14569		GUARD, BREAKER, LEXAN, MAIN PANEL (91000912)
66	1	16364		PHOTOMETAL TAG, SET, PHOTOMETAL, MAIN PANEL (93000906)	76				(NOT USED)
65	1	16365		PHOTOMETAL TAG, SET, PHOTOMETAL, MAIN PANEL, EX. KIT (93000907)	75				(NOT USED)
64	2	1788		PANDUIT COVER, 1Wx3H, WIRING DUCT	74				(NOT USED)
63	2	730667		PANDUIT 1Wx3H WIRE DUCT	73	1	14402		KIT, CORDS, POWER UNIT SKID
62	1	0770		TRIP PLUG, 20A, F/BREAKER, 480V	72				(NOT USED)
61	2	0777		TRIP PLUG, 15A, F/BREAKER, 480V	71				(NOT USED)

DRAWN	ELN	PROJECT	GENERIC
MODEL	HCI		
S. CHK.		E. CHK.	
TITLE		HCI, MAIN PANEL, GENERAL ASSEMBLY	
TESCO PART No.	3302	UNITS	INCHES
SHEET	30F5	SCALE	1:6
FILE NAME	93000315.be1		
REV.	2		

STANDARD TOLERANCES:	
XX.XX	± 1/16
XX.X	± 0.03
XX.XXX	± 0.01
XX.XXX	± 0.005
ANGLE	± 0.5°



0 ELN 06/05/07 ISSUED FOR MANUFACTURE
1 ELN 06/02/07/ELN-26 UPDATE TO THE AS BUILT
2 ELN 01/02/05/24-0017 REVISE ITEM 9, 13, 24, 25, 44, 45, 50, 95-67
REV. BY: YV/M/BI ICOP

DESCRIPTION

90 3 3962 BUSHING, PLASTIC, INSULATED, 1/4"
89 3 3959 LOCKNUT, 1/4"
88 (NOT USED)
87 3 4047 FITTING, HYD, STR, *4MNPT x *6MJIC-BLKHD
86 3 0664 SEAL, STAT-O, BONDED, 3/8"
85 3 0405 FITTING, HYD, CAP, *6FJIC, STL
84 (NOT USED)
83 1 2121 HUB, MYERS, STR, 1/2"
82 1 14005 PLUG, DRAIN, 1/2", F/MAIN PANEL
81 (NOT USED)

91 3 3958 RING, SEALING, 1/4"
90 2 3961 BUSHING, PLASTIC, INSULATED, 1"
89 2 3957 LOCKNUT, CONDUIT, 1", STL
88 2 3956 RING, SEALING, 1"
87 6 3960 BUSHING, PLASTIC, INSULATED, 3/4"
86 6 3955 LOCKNUT, 3/4" HUB
85 6 2124 RING, SEALING, 3/4"
84 9 0845 BUSHING, PLASTIC, INSULATED, 1/2"
83 9 3785 LOCKNUT, 1/2" HUB
82 9 2123 RING, SEALING, 1/2"
81 3 3958 RING, SEALING, 1/4"

80 2 3961 BUSHING, PLASTIC, INSULATED, 1"
79 2 3957 LOCKNUT, CONDUIT, 1", STL
78 2 3956 RING, SEALING, 1"
77 6 3960 BUSHING, PLASTIC, INSULATED, 3/4"
76 6 3955 LOCKNUT, 3/4" HUB
75 6 2124 RING, SEALING, 3/4"
74 9 0845 BUSHING, PLASTIC, INSULATED, 1/2"
73 9 3785 LOCKNUT, 1/2" HUB
72 9 2123 RING, SEALING, 1/2"
71 3 3958 RING, SEALING, 1/4"

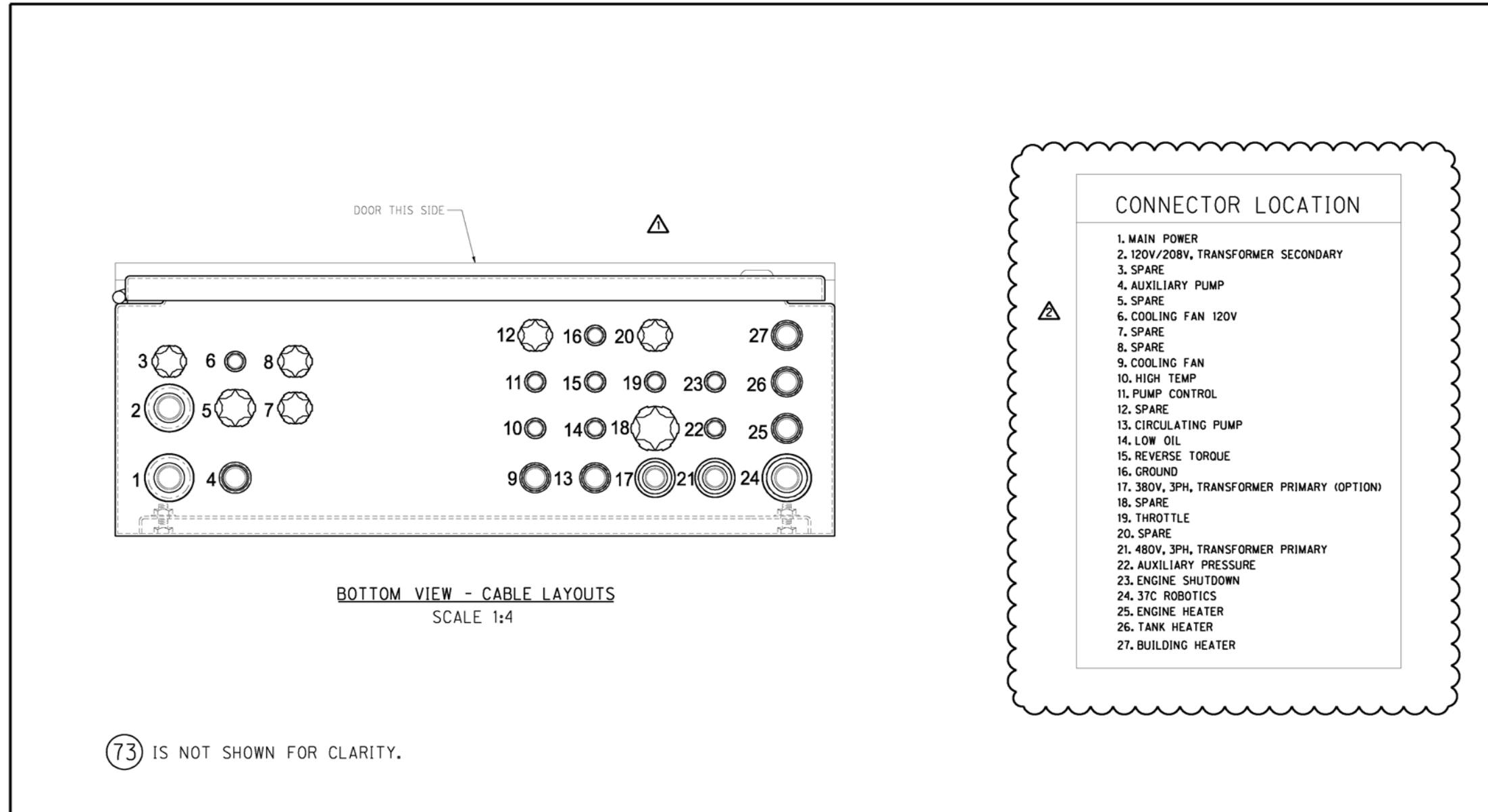
STANDARD TOLERANCES:
XX, XX.X ± 1/16
XX.XX ± 0.03
XX.XXX ± 0.01
XX,XXX ± 0.005
ANGLE ± 0.5°

TESCO CORPORATION

D. CHK. E. CHK. APPD.

TITLE HCI, MAIN PANEL, GENERAL ASSEMBLY

TESCO PART No. 3302 UNITS INCHES SHEET 40F5 SCALE 1/8 FILE NAME 93000315.bel REV. 2



ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
110					120				
109					119				
108					118				
107					117				
106					116				
105					115				
104					114				
103					113				
102					112				
101					111				

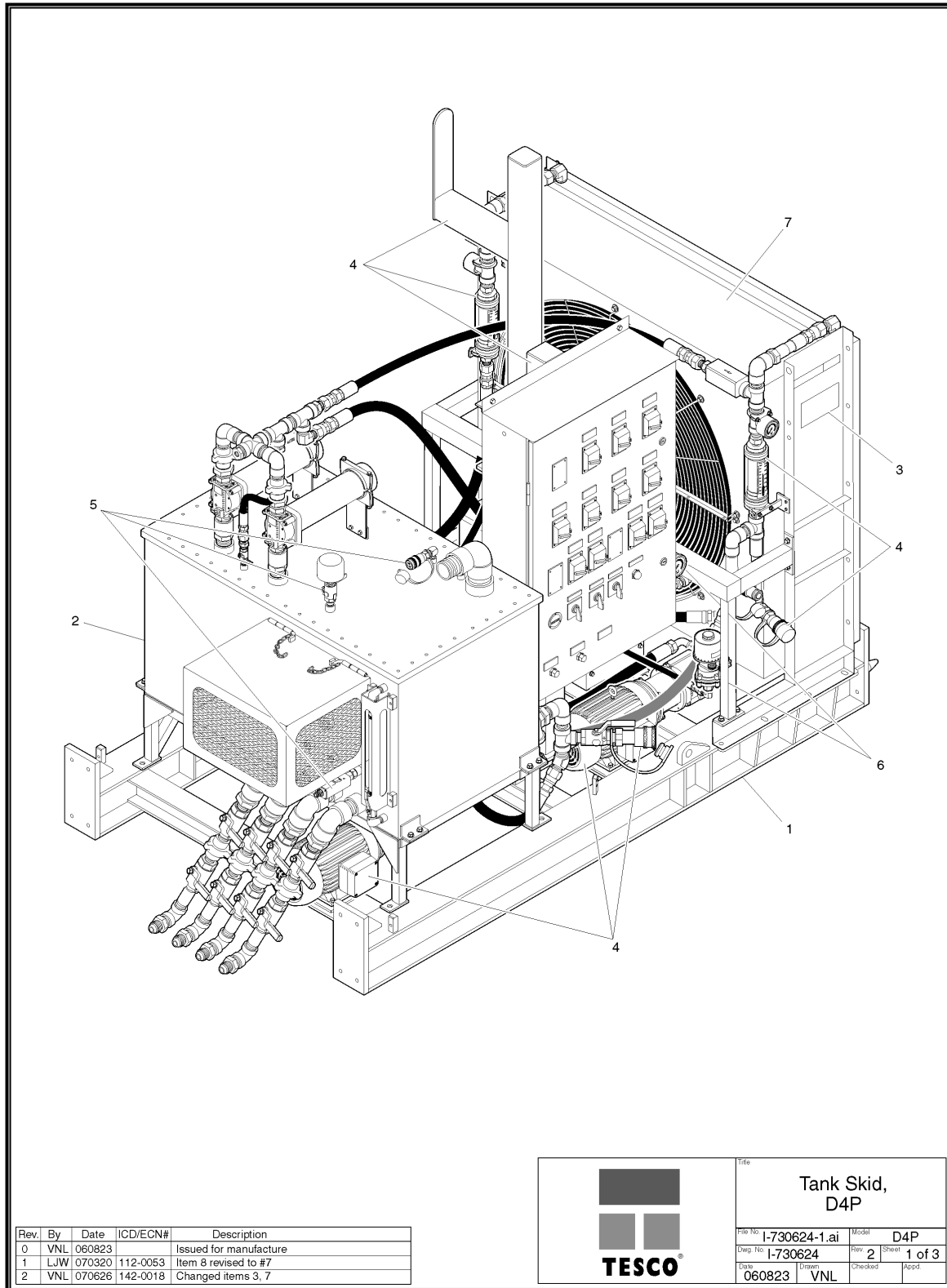
ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
110					120				
109					119				
108					118				
107					117				
106					116				
105					115				
104					114				
103					113				
102					112				
101					111				

0 ELN 06/02/04 ISSUED FOR MANUFACTURE 1 ELN 06/02/04/06/01 UPDATE TO THE AS BUILT 2 ELN 01/02/08/01 REVISE ITEM 9, 13, 24, 25, 44, 49, 50, 95-67 MFL BY: MFL/BI IDP	DRAWN ELN PROJECT GENERIC MODEL HCI D. CHK. E. CHK. APPD.	STANDARD TOLERANCES: XX.XX ± 1/16 XX.X ± 0.03 XX.XX ± 0.01 XX.XXX ± 0.005 ANGLE ± 0.5°	TESCO CORPORATION
TITLE HCI, MAIN PANEL, GENERAL ASSEMBLY			
PART No. 3302	UNITS INCHES	SHEET 50F5	SCALE 1:6 FILE NAME 93000315.bel REV. 2


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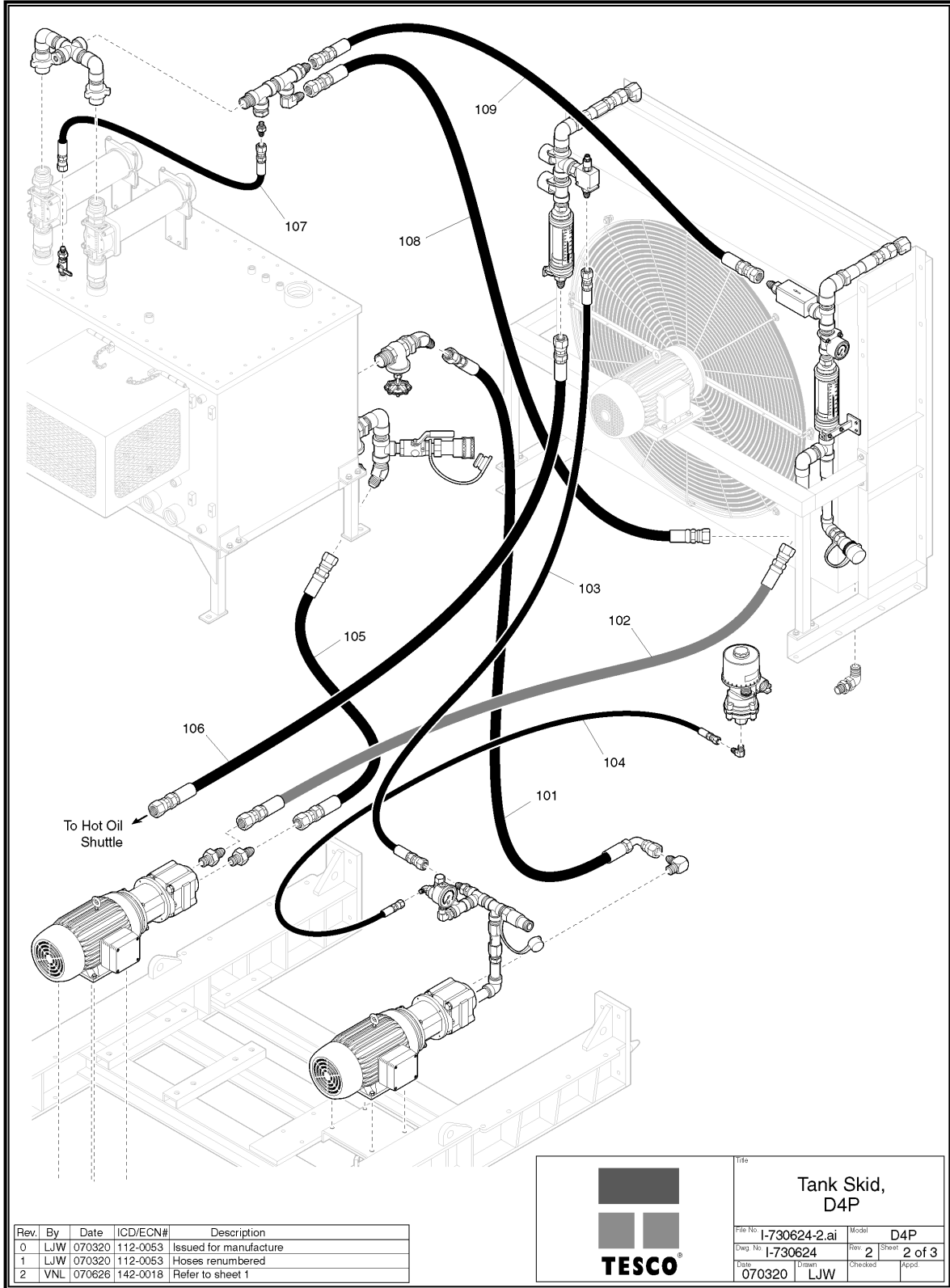
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SKID, TANK, COMPLETE, D4P




Rev	By	Date	ICD/ECN#	Description
0	VNL	060823		Issued for manufacture
1	LJW	070320	112-0053	Item 8 revised to #7
2	VNL	070626	142-0018	Changed items 3, 7

		Title	
		Tank Skid, D4P	
File No.	I-730624-1.ai	Model	D4P
Dwg. No.	I-730624	Rev.	2
Drawn	060823	Checked	VNL
Entered	VNL	Sheet	1 of 3
Appd.		Appd.	



Rev.	By	Date	ICD/ECN#	Description
0	LJW	070320	112-0053	Issued for manufacture
1	LJW	070320	112-0053	Hoses renumbered
2	VNL	070626	142-0018	Refer to sheet 1

		Title	
		Tank Skid, D4P	
File No.	I-730624-2.ai	Model	D4P
Dwg. No.	I-730624	Rev.	2
Issue	070320	Drawn	LJW
		Checked	
		Appd.	
		Sheet	2 of 3

Parts List



Part # 730624

Drawing # I-730624

Rev. 2 Page 3 of 3

File # I-730624.xls

Refer: 2 Illustrations

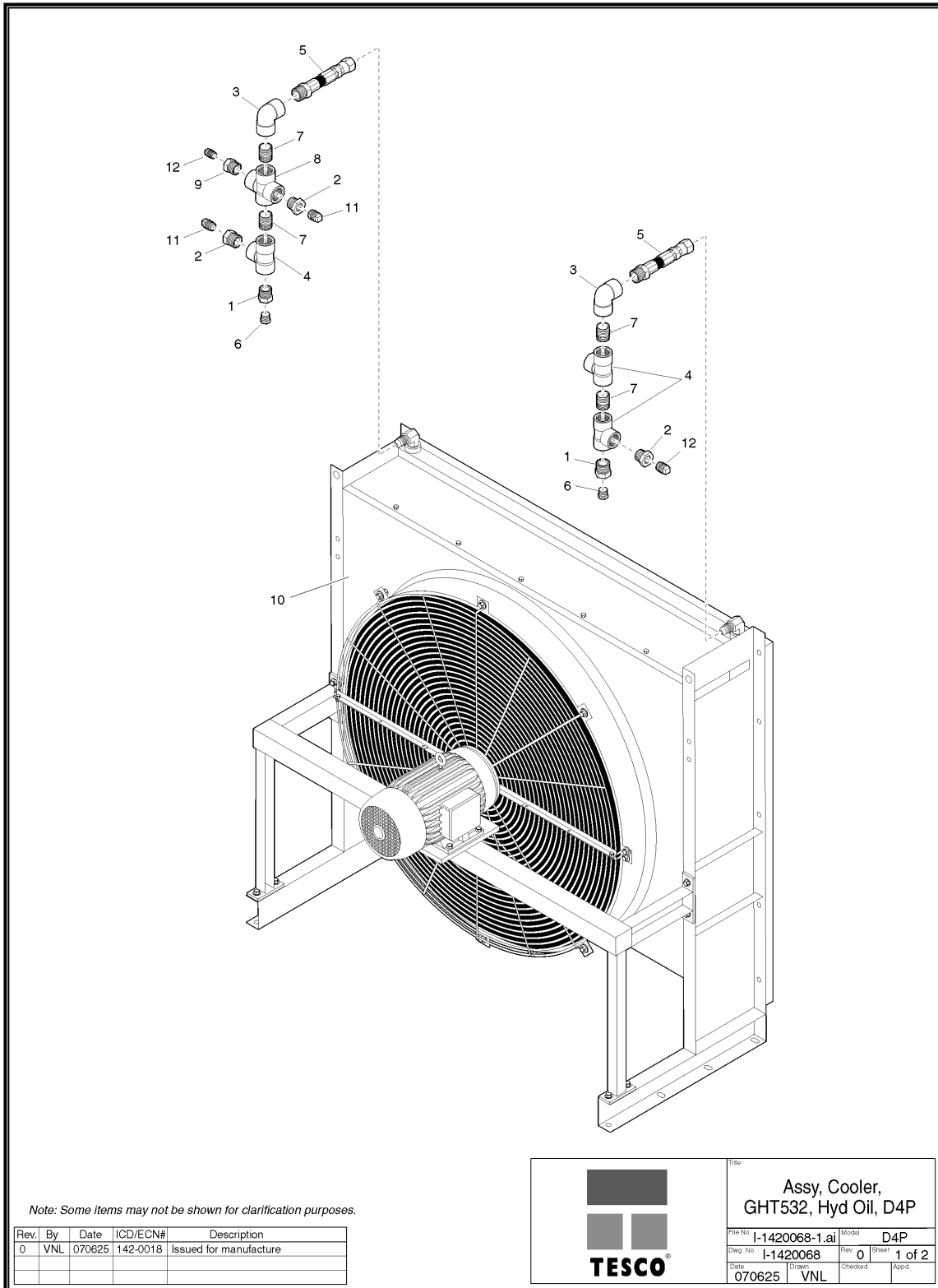
Drawing Title: Tank Skid,D4P

Item #	Tesco #	Qty	Description
1	3303	1	SKID, TANK, CAT
2	3307	1	Assy, Oil Tank, D4P
3	1120088	2	Decal, Tesco Hydraulic Oil ISO68, 5"x2", Red
4	730618	1	Kit, Tank Skid Final Assembly, D4P
5	730619	1	Kit, Oil Tank Final Assembly, D4P
6	730620	1	Kit, Auxiliary & Circulating Pump Instl, D4P
7	1420068	1	Assy, Cooler, GHT532, Hyd Oil, D4P
*8	731143	796 L	Oil, Hyd, ISO 68, Tesco
100	1120101	1	Kit, Hoses, Hyd, Tank Skid, D4P
101	16746	1	Hose, Hyd, 100R2-AT, #16x38", FJICx90°FJIC
102	15021	1	Hose, Hyd, 100R2-AT, #16x91", FJICx FJIC
103	3374	1	Hose, Hyd, 100R2-AT, #8x85", FJICx FJIC
104	4376	1	Hose, Hyd, 100R2-AT, #4x22", FJICx FJIC
105	3360	1	Hose, Hyd, 100R2-AT, #16x23", FJICx FJIC
106	17396	1	Hose, Hyd, 100R2-AT, #20x120", FJICx FJIC
107	5476	1	Hose, Hyd, 100R2-AT, #8x18", FJICx FJIC
108	16777	1	Hose, Hyd, 100R2-AT, #32x115", FJICx FJIC
109	1120102	1	Hose, Hyd, 100R2-AT, #24x75", FJICx FJIC

* - Item not shown in Illustration

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COOLER ASSY, GHT532, HYD OIL, D4P



Note: Some items may not be shown for clarification purposes.

Rev.	By	Date	ICD/ECN#	Description
0	VNL	070625	142-0018	Issued for manufacture

		Title	
		Assy, Cooler, GHT532, Hyd Oil, D4P	
File No.	I-1420068-1.ai	Model	D4P
Draw. No.	I-1420068	Rev.	0
Date	070625	Sheet	1 of 2
Drawn	VNL	Checked	Appd

Parts List

Part # 1420068

Drawing # I-1420068

Rev. 0

Page 2 of 2



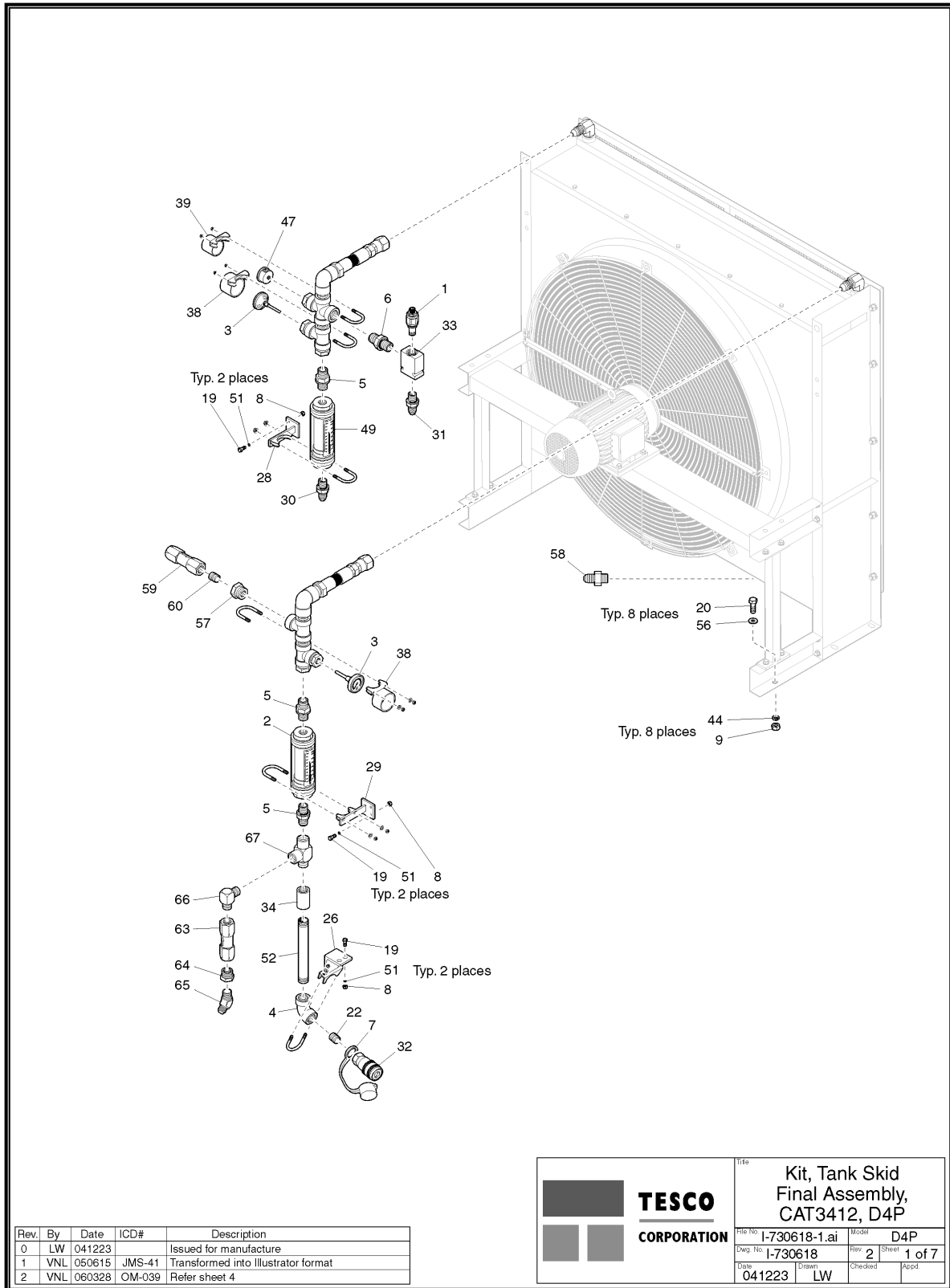
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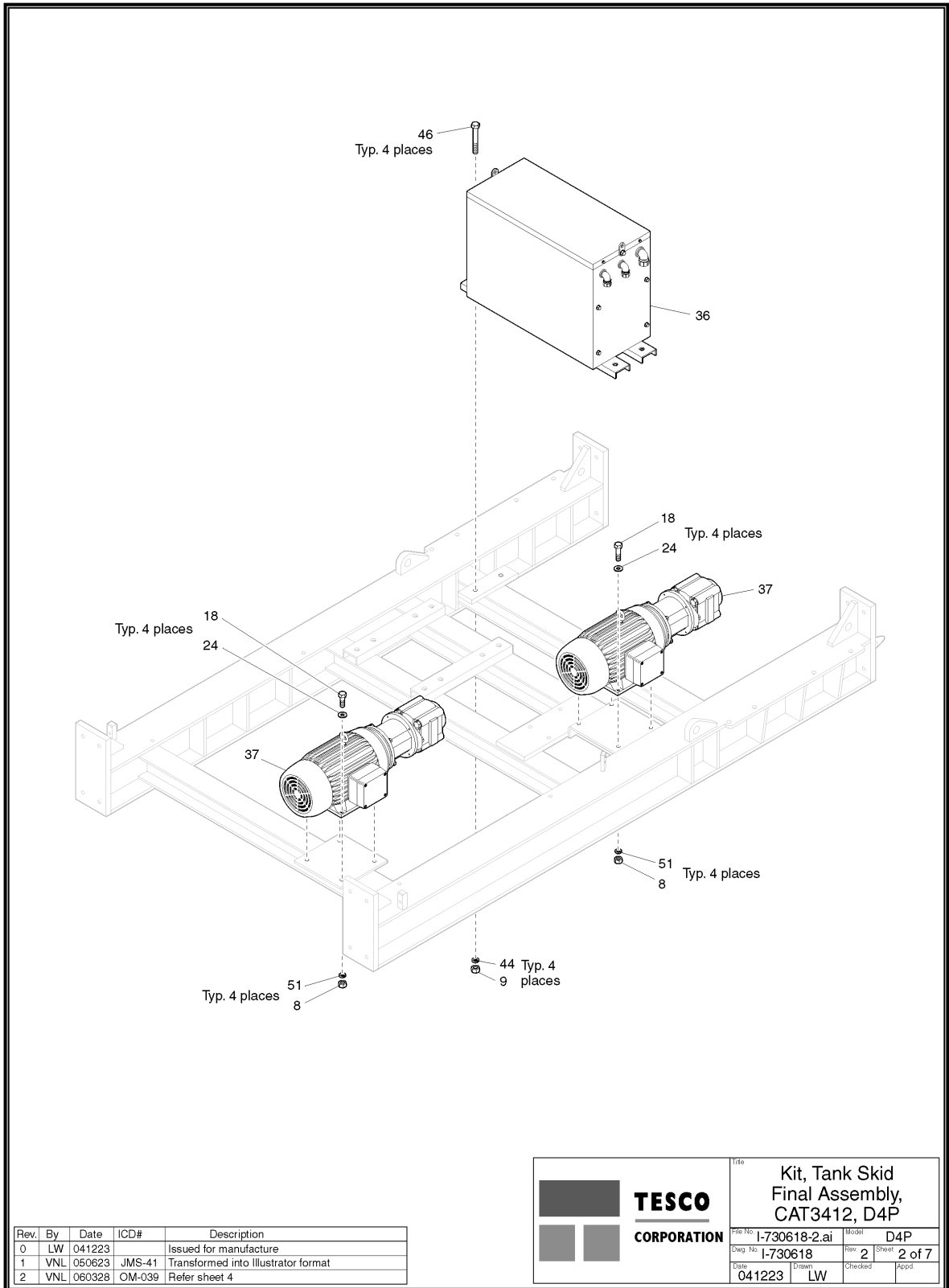
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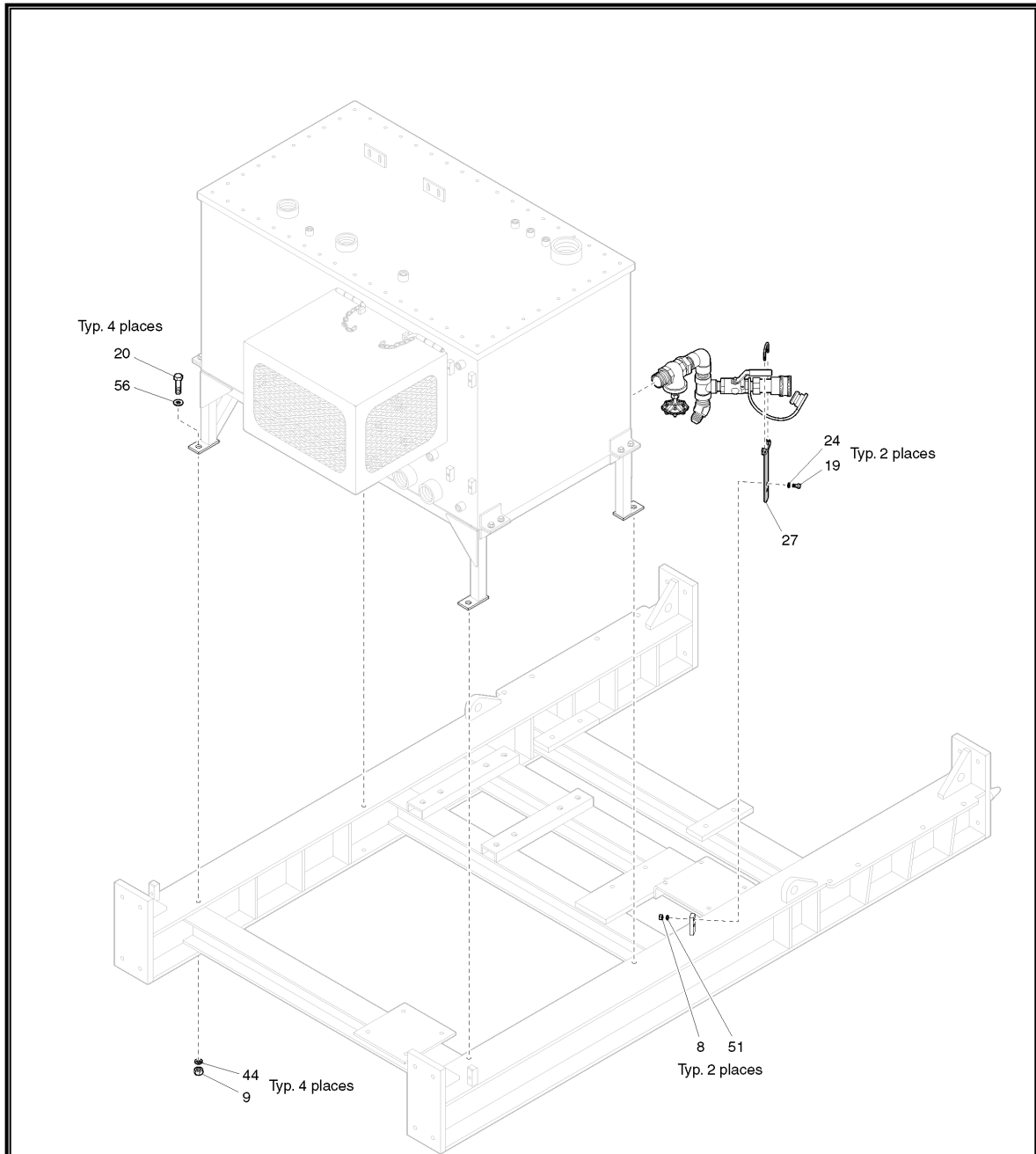
Drawing Title: Assy,Cooler,GHT532,Hyd Oil,D4P

Item #	Tesco #	Qty	Description
1	0085	2	Fitting,Pipe,Reducer,6000-psi,1-1/4"FNPTx2"MNPT
2	0092	3	BUSHING,HEX,FS,2"X1/2"
3	0125	2	Fitting,Pipe,90°Elb,2000-psi,2",FNPT
4	0173	3	Fitting,Pipe,Tee,2000-psi,2",FNPT
5	1142	2	Hose,Hyd,100R1-AT,#32x11.5",MNPTxFJIC
6	12100	2	Fitting,Hyd,Plug,Hex Hd,1-1/4"MNPT
7	1338	4	Fitting,Pipe,Nipple,Sch80,2"MNPTxClose
8	2091	1	Fitting,Pipe,Cross,2000-psi,2",FNPT
9	3877	1	Fitting,Pipe,Bushing,Hex,1/4"FNPTx2"MNPT
10	1420046	1	Cooler,GHT532,250psi/250°F,230/460VAC,D4P/D6P
11	9159	3	PLUG,PLASTIC, 1/2" MNPT
12	9160	1	PLUG,PLASTIC, 1/4" MNPT

Kit,Tank Skid Final Assembly,CAT3412,D4P

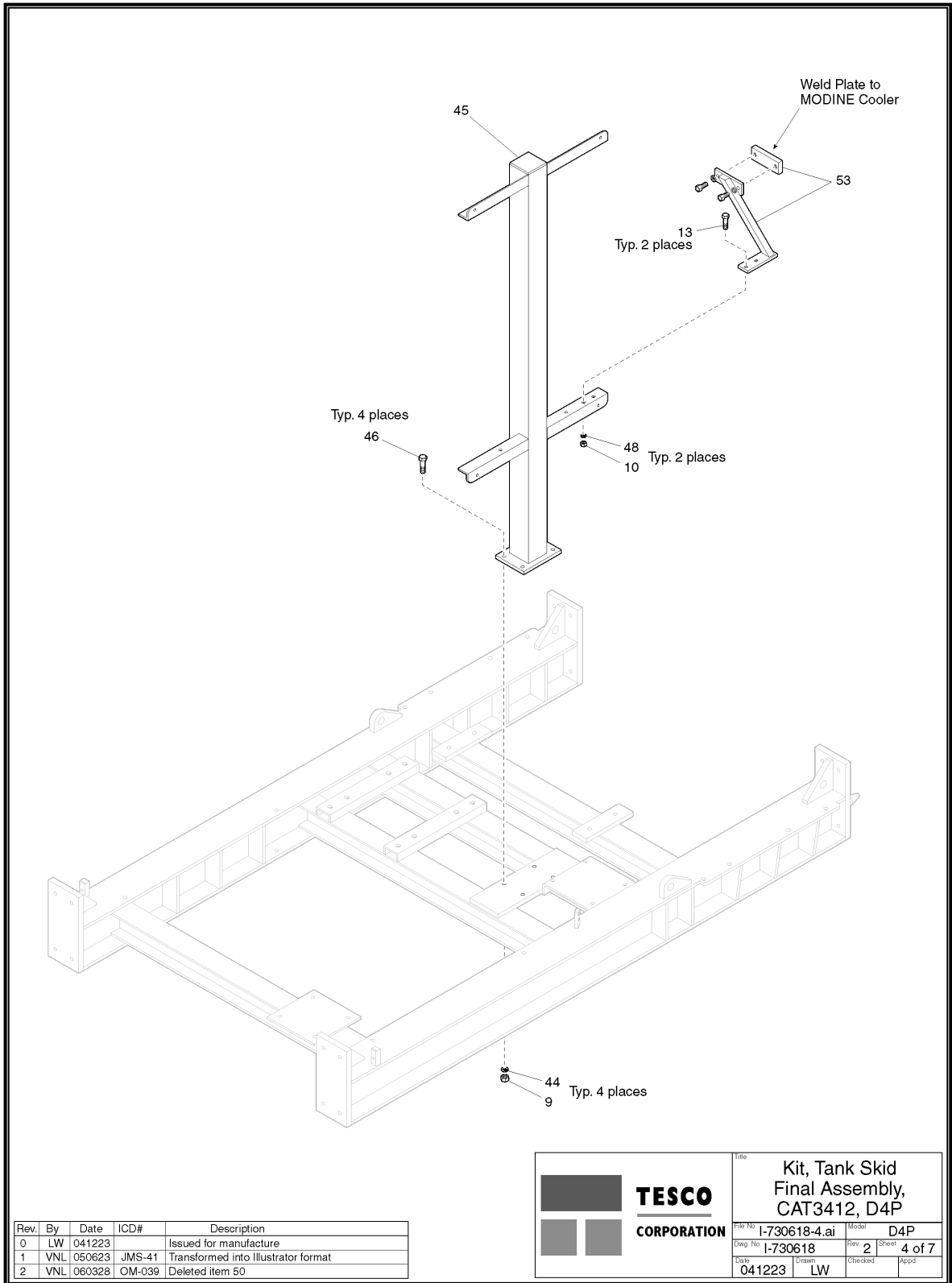






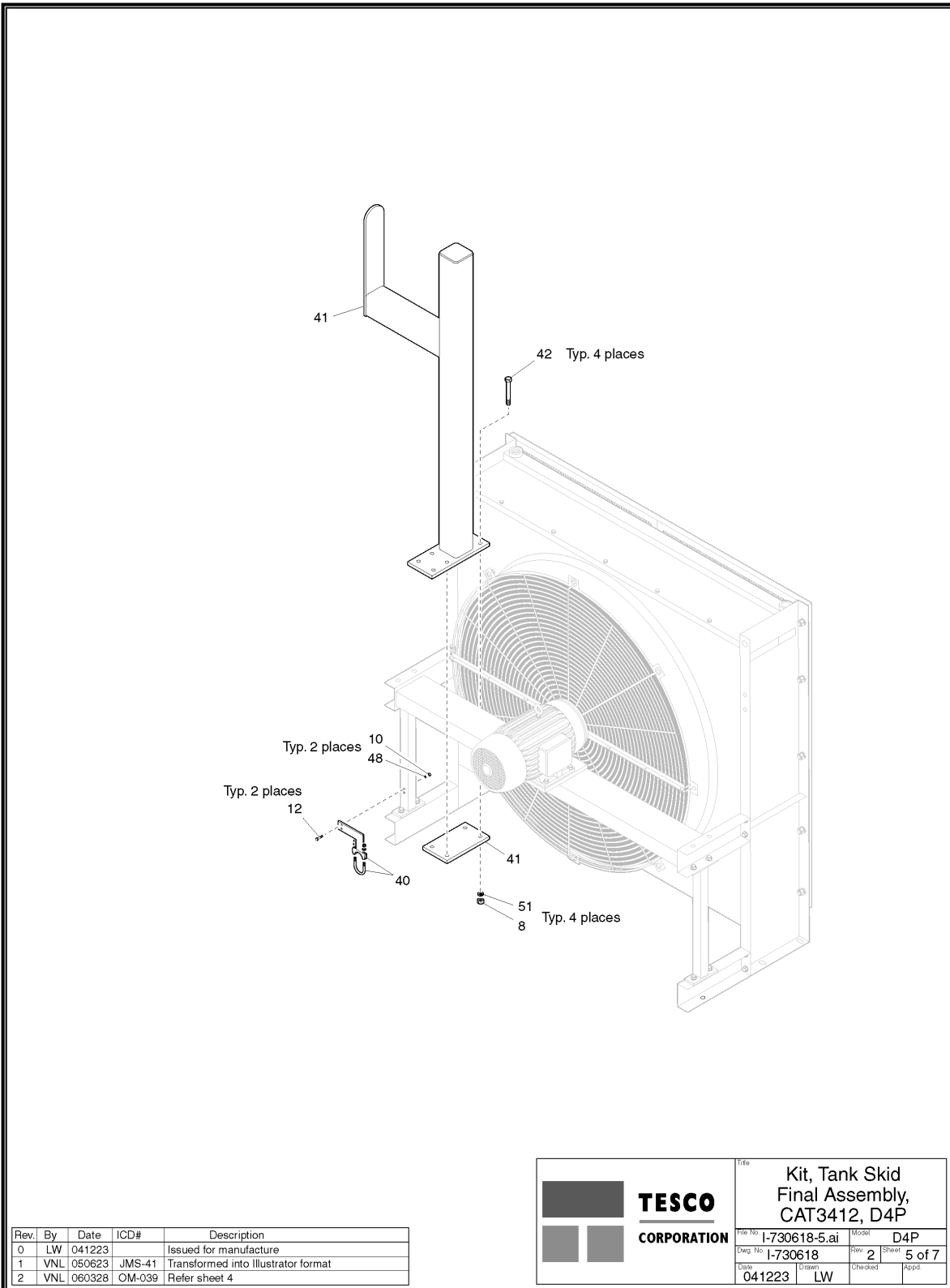
Rev.	By	Date	ICD#	Description
0	LW	041223		Issued for manufacture
1	VNL	050623	JMS-41	Transformed into Illustrator format
2	VNL	060328	OM-039	Refer sheet 4

	File No: Kit, Tank Skid Final Assembly, CAT3412, D4P	
	Part No: I-730618-3.ai	Model: D4P
	Draw No: I-730618	Rev: 2 Sheet: 3 of 7
	Date: 041223	Drawn: LW Checked:



Rev.	By	Date	ICD#	Description
0	LW	041223		Issued for manufacture
1	VNL	050623	JMS-41	Transformed into Illustrator format
2	VNL	060328	OM-039	Deleted item 50

		Title	
		Kit, Tank Skid Final Assembly, CAT3412, D4P	
Part No.		Model	
I-730618-4.ai		D4P	
Draw No.		Rev	
I-730618		2	
Date		Drawn	
041223		LW	
		Checked	
		Appd	



Rev.	By	Date	ICD#	Description
0	LW	041223		Issued for manufacture
1	VNL	050623	JMS-41	Transformed into Illustrator format
2	VNL	060328	OM-039	Refer sheet 4

		Title	
		Kit, Tank Skid Final Assembly, CAT3412, D4P	
Part No.		Model	
I-730618-5.ai		D4P	
Dwg No.		Rev	
I-730618		2	
Date		Sheet	
041223		5 of 7	
Drawn		Checked	
LW		Appd	

Parts List



Part # 730618

Drawing # I-730618

Rev. 2

Pages 6 - 7 of 7

File # I-730618.xls

Refer: 5 Illustrations

Drawing Title: Kit,Tank Skid Final Assembly,CAT3412,D4P

Item #	Tesco #	Qty	Description
1	0033	1	VALVE,PILOT OPERATED RELIEF,F/AUX PUMP,CP2102
2	0067	1	METER,FLOW,UNI-DIR,3500PSI,50GPM,1.25
3	0070	2	THERMOMETER,BIMETAL,0-250,1/2
4	0115	1	ELBOW,PIPE,45 DEG,2000#,1"
5	0223	3	FTG,HYD,STR,1-1/4MORBX1-1/4MPT
6	0230	1	FTG,HYD,STR,1/2MORBX1/2MPT
7	0442	1	CAP,DUST,HYD,BLACK,F/FF FEM QUICK CPLG,1
8	0961	4	NUT,HEX,PLTD,NC,GR8,3/8"
9	0965	24	NUT,HEX,PLTD,NC,GR8,5/8"
10	0968	4	NUT,HEX,PLTD,NC,GR8,1/2"
11	...	...	Not used
12	...	...	Not used
13	0983	6	CAP,GR8,NC,PLT,1/2 X 1-1/2
14	0987	4	CAP,GR8,NC,PLT,1/2 X 3
15	0990	8	CAP,GR8,NC,PLT,1/2 X 2
16	1004	4	CAP,GR8,NC,PLT,3/4 X 3-1/2
17	1007	2	CAP,GR8,NC,PLT,3/8 X 3
18	1010	8	CAP,GR8,NC,PLT,3/8 X 2
19	1013	8	CAP,GR8,NC,PLT,3/8 X 1-1/4
20	1019	16	CAP,GR8,NC,PLT,5/8 X 2
21	1073	16	WASHER,FLAT,ALLOY,Z/DC,1/2"
22	1300	1	NIPPLE,THR,SCH80,1"XCL
23	13670	4	WASHER,FLAT,ALLOY,USS,GR8,3/4"
24	13721	8	WASHER,FLAT,ALLOY,USS,3/8"
25	13723	16	WASHER,FLAT,ALLOY,USS,1/2"
26	13849	1	ASSY,BRACKET,QUICK COUPLING,AIR COOLER,16V2000,DD
27	13852	1	ASSY,BRACKET,QUICK COUPLING,OIL TANK SKID,16V2000
28	13920	1	BRACKET,SUPPORT,LEFT,FLOWMETER,D6P,16V2000
29	13921	1	BRACKET,SUPPORT,RIGHT,FLOWMETER,D6P,16V2000
30	1489	1	FTG,HY,STR,1-1/4MORBX1-1/4MJIC
31	1502	1	FTG,HYD,STR,1/2MORBX1/2MJIC
32	1998	1	COUPLING,QUICK,FF,FEMALE,1X1FNPT
33	2021	1	BODY,CARTRIDGE,2 WAY,#8 SAE
34	2084	1	COUPLING,THR,FS,3000#,1-1/4"X1
35	2784	1	HOSE,HYD,2 W,#32 X 72" W/FJIC
36	3301	1	ASSY,20KVA,TRANSFORMER,HS/HC
37	3304	2	ASSY,CIRC/AUX PUMP,460V
38	3311	2	ASSY,GUARD,TEMP GAUGE,4"X2-3/4"
39	3314	1	ASSY,COVER,PRESSURE GAUGE
40	3318	1	BRKT, SUPPORT, OIL TO FAN

Parts List



Part # 730618

Drawing # I-730618

Rev. 2

Pages 6 - 7 of 7

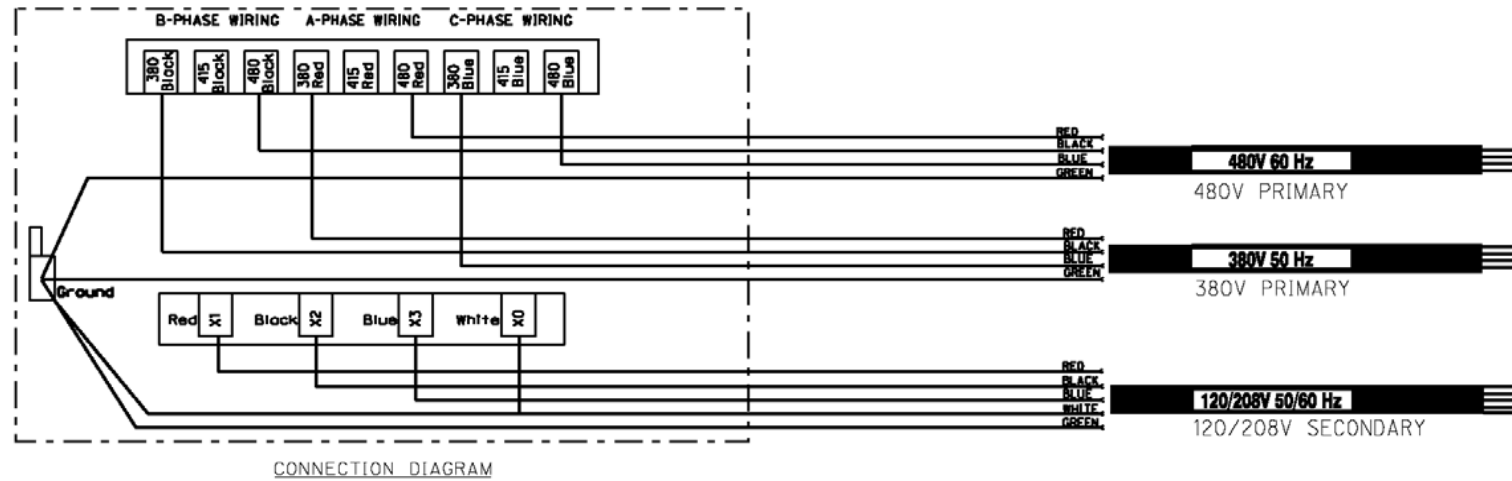
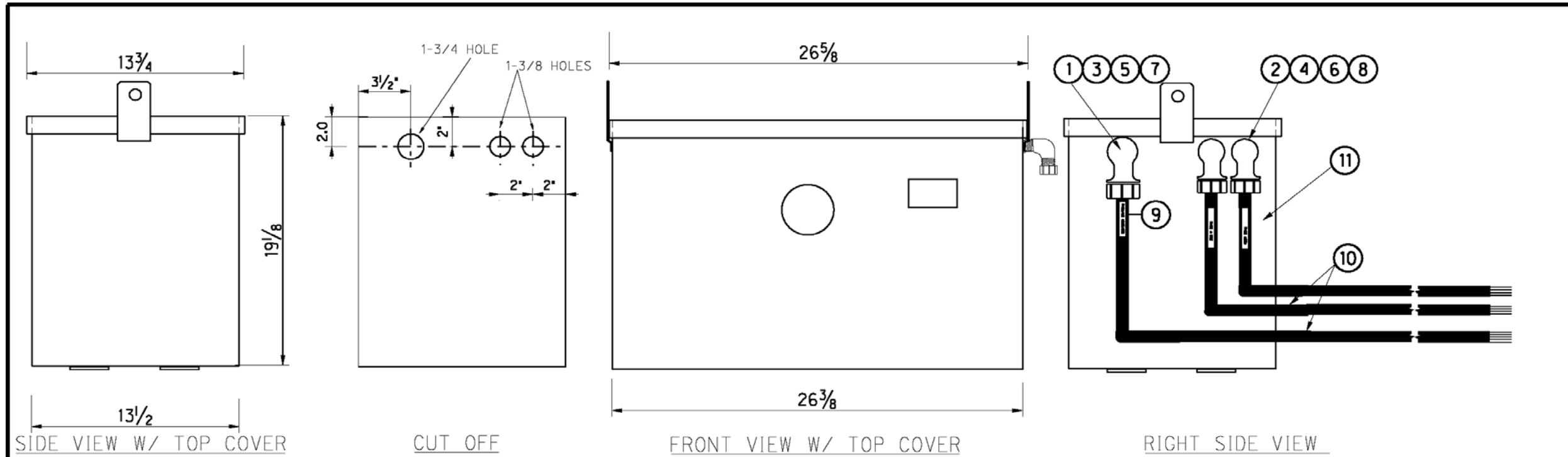
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Refer: 5 Illustrations

Drawing Title: Kit,Tank Skid Final Assembly,CAT3412,D4P

Item #	Tesco #	Qty	Description
41	3320	1	STAND, COOLER CABLE, 2 PC
42	3628	4	CAP,GR8,NC,PLT,3/8 X 4-1/2
43	3653	8	CAP,GR8,NC,PLT,5/8 X 3-1/2
44	3687	24	WASHER,LOCK,ALLOY,PLTD,5/8"
45	4348	1	ASSY,MOUNT,MAIN CONTROL PANEL,D4P/D6P
46	4815	8	CAP,GR8,NC,PLT,5/8 X 2-3/4
47	5175	1	GAUGE,CBM,200PSI,2-1/2,U-CLAMP
48	5881	4	Washer,Lock,Helical Spring,1/2",Alloy,Pld
49	6208	1	METER,REV FLW,OIL,BI-DIR,SS,5000PSI,100GPM,RD
50	...	...	Not used
51	7135	18	WASHER,LOCK,ALLOY,PLTD,3/8"
52	7213	1.5 FT	PIPE,BLK,A106,SCH80,1"
53	7230	1	BRACE,CONTROL PANEL,D6P
54	7855	4	WASHER,LOCK,ALLOY,PLTD,3/4"
55	...	...	Not used
56	9232	24	WASHER,FLAT,ALLOY,Z/DC,5/8"
57	0096	1	BUSHING,HEX,FS,2"X1-1/2"
58	0296	1	FTG,HYD,STR,2MPTX2MJIC
59	16792	1	VALVE,CHECK,INLINE,1-1/2FNPT,65PSI
60	1303	1	NIPPLE,THR,SCH80,1-1/2"XCL
61	1071	4	Washer,Lock,Helical Spring,1/2",Stl,Pld
62	720195	2	Nut,Hex,Lock,Spiralock,Flg,1/2"-13SPL,Gr8,Pld
63	0028	1	VALVE,CHECK,1-1/4"FNPT,6",5 PSI,OAL,F/AIR COOLER
64	0088	1	Fitting,Pipe,Reducer,3000-psi,1"FNPTx1-1/4"MNPT
65	0304	1	Fitting,Hyd,45°Elb,#16MJICx#16MNPT
66	0241	1	Fitting,Hyd,90°Elb,#20MNPTx#20MNPT
67	0365	1	Fitting,Hyd,Tee,#20MNPT-Runx#20FNPTx#20FNPT

TRANSFORMER ASSY, 380/480V, 120/208V, 20KVA, D4P/D6P



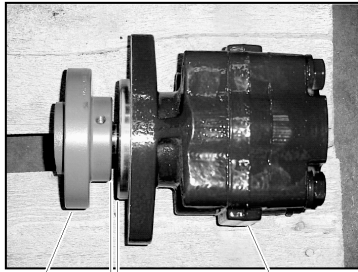
ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
10	7	14245		Cable,Bostrlg,600V,110C,*8,4C	20				
9	4	14244		Cable,Bostrlg,600V,110C,*4,5C	19				
8	2	3961		Bushing,Elec,1",Plastic	18				
7	1	3962		Bushing,Elec,1-1/4",Plastic	17				
6	2	3957		Nut,Lock,Elec,1" S11	16				
5	1	3959		Nut,Lock,Elec,1-1/4" S11	15				
4	2	3956		Ring,Sealing,Elec,1"	14				
3	1	3958		Ring,Sealing,Elec,1-1/4"	13				
2	2	14598		Connector,Cable,90 Eib,1" SR,(0.625"-0.750")	12	5	5086		Lug,Elec,Mech,*5-2/0,1C,1Hole,1/4"
1	1	4095		Connector,Cable,90 Eib,1-1/4" SR,(1.065"-1.205")	11	1	2441		Transformer,Dlat,380/480-120/208V,20KVA,3-ph,Epoxy

DRWN	SFH	PROJECT	GENERIC	STANDARD TOLERANCES:
MODEL	HCI			XX.XX% ± 1/8
D. CHK.		E. CHK.		XX.X ± 0.03
				XX.XX ± 0.01
				XX.XXX ± 0.005
				ANGLE ± 0.5°
TITLE ASSY,TRANS,20KVA,380/480-120/208V 50/60Hz (HCI) TESCO PART No. 3301 UNITS INCHES SHEET 10F1 SCALE NTS FILE NAME 93100159.bel REV. 0				

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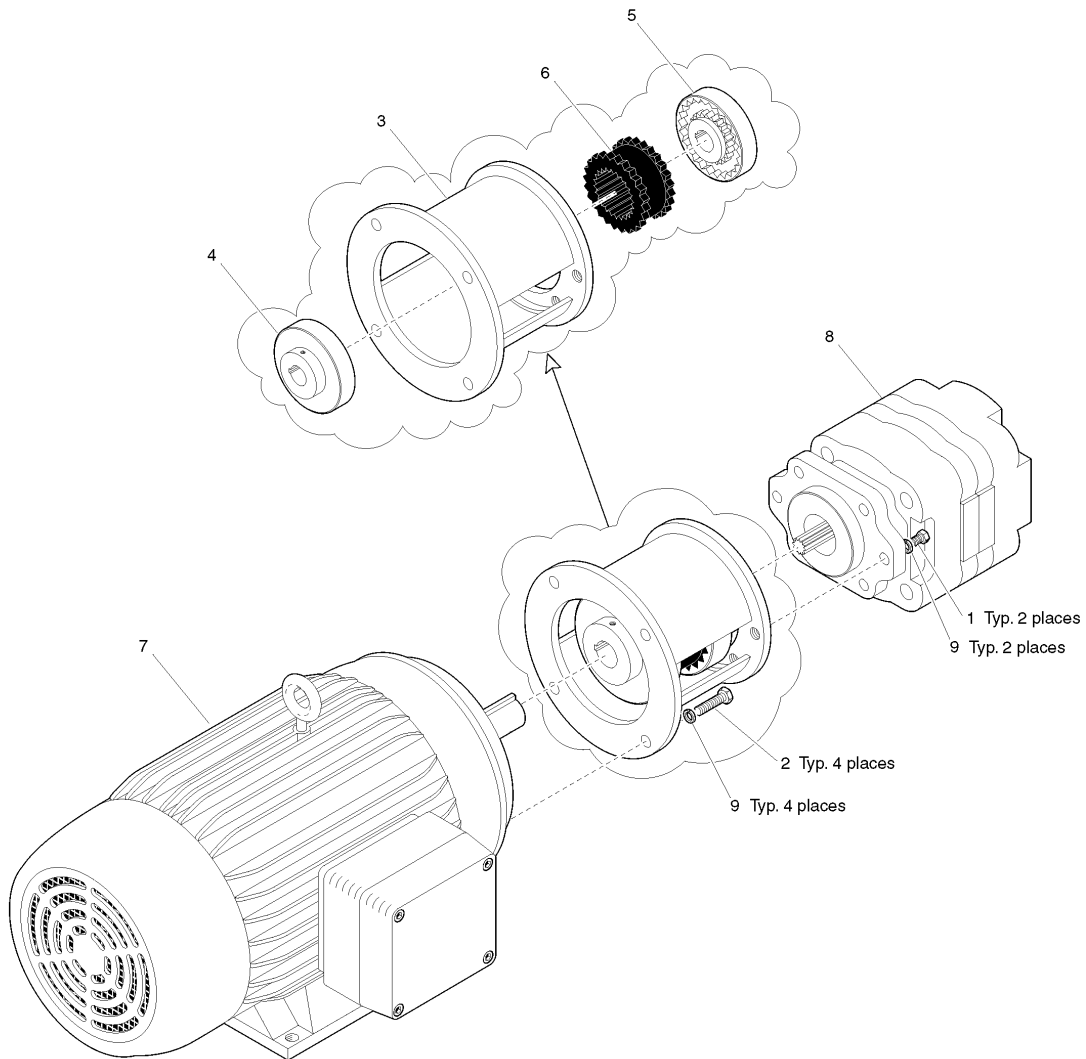
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CIRCULATION/AUXILIARY PUMP ASSY, 460V



NOTES:

1. Install pump (item 8) onto bell housing (item 3) and fasten.
2. Install coupling half (item 5) onto pump and set gap at 3/16" and tighten set screw.
3. Slide coupling half (item 4) onto motor shaft (item 7) along with the coupling insert (item 6), do not tighten set screw.
4. Install pump/bell housing assembly onto motor.
5. Slide coupling half (item 4) and coupling insert (item 6) toward pump, make sure that the insert is fully engaged into both coupling halves. Slide coupling half (item 4) back to allow 1/16" float of insert.
6. Tighten the motor coupling half set screw and install guards.



Rev.	By	Date	ICD/ECN#	Description
1	LJW	061221	109-0012	Issued for manufacture



Title Auxiliary Pump, Assy,460V,60Hz			
File No.	I-3304-1.ai	Model	
Dwg. No.	I-3304	Rev	1
Date	061221	Drawn	LJW
		Checked	
		Acct	
		Sheet	1 of 2



Parts List

Part # 3304

REV. 1

Drawing # I-3304

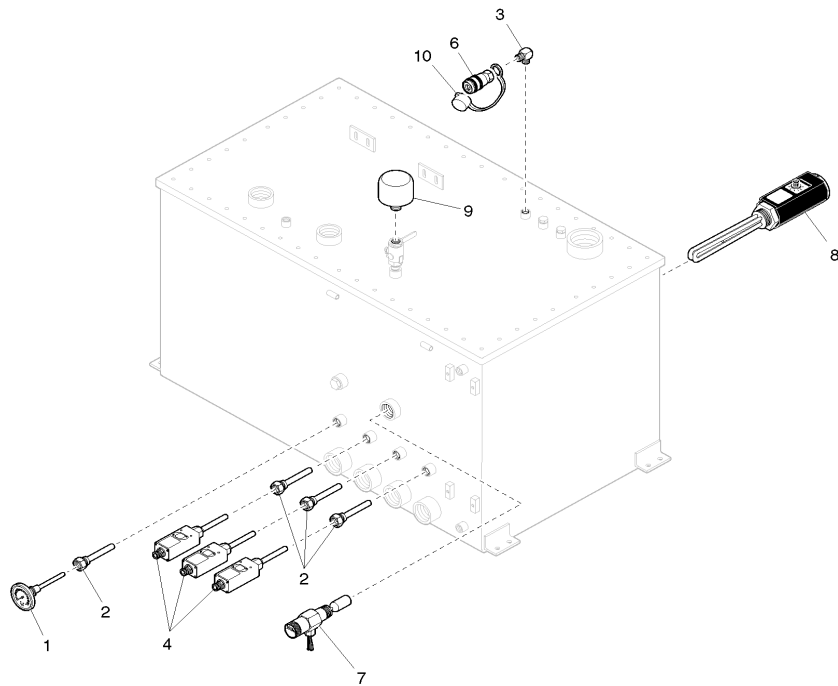
File # I-3304.xls

Refer: 1 Illustration

Drawing Title: Assy., Circ/Aux Pump, 460V

<i>Item #</i>	<i>Tesco #</i>	<i>Qty</i>	<i>Description</i>
1	0983	2	CAP,GR8,NC,PLT,1/2 X 1-1/2
2	0988	4	CAP,GR8,NC,PLT,1/2 X 1-1/4
3	1768	1	BELL HOUSING,SEALUM,5-3/4"
4	1825	1	COUPLER,HALF,7S,1-3/8
5	1826	1	COUPLER,HALF,7S,1
6	1830	1	Coupling,Sleeve,Quadra-Flex,7,JEM
7	2159	1	MOTR,WEG,10HP,230/480V,1800,XP
8	2746	1	PUMP,GEAR,1/2,P300C586LDZA0532
9	5881	6	WASHER,LOCK,ALLOY,PLTD,1/2"

Kit, Oil Tank Final Assembly, CAT3412, D4P



Rev.	By	Date	ICD#	Description
0	LW	041223		Issued for manufacture
1	VNL	050414	LSW-59	Deleted items 4, 5, 11
2	VNL	060629	YFR-001	Transformed into Illustrator format

		Title	
		Kit, Oil Tank Final Assembly, D4P	
File No.	I-730619-1.ai	Model	D4P
Dwg No.	I-730619	Rev.	2
Date	041223	Drawn	LW
		Checked	
		Appd.	
		Sheet	1 of 2

Parts List

Part # 730619

Drawing # I-730619

Rev. 2

Page 2 of 2

File # I-730619.xls

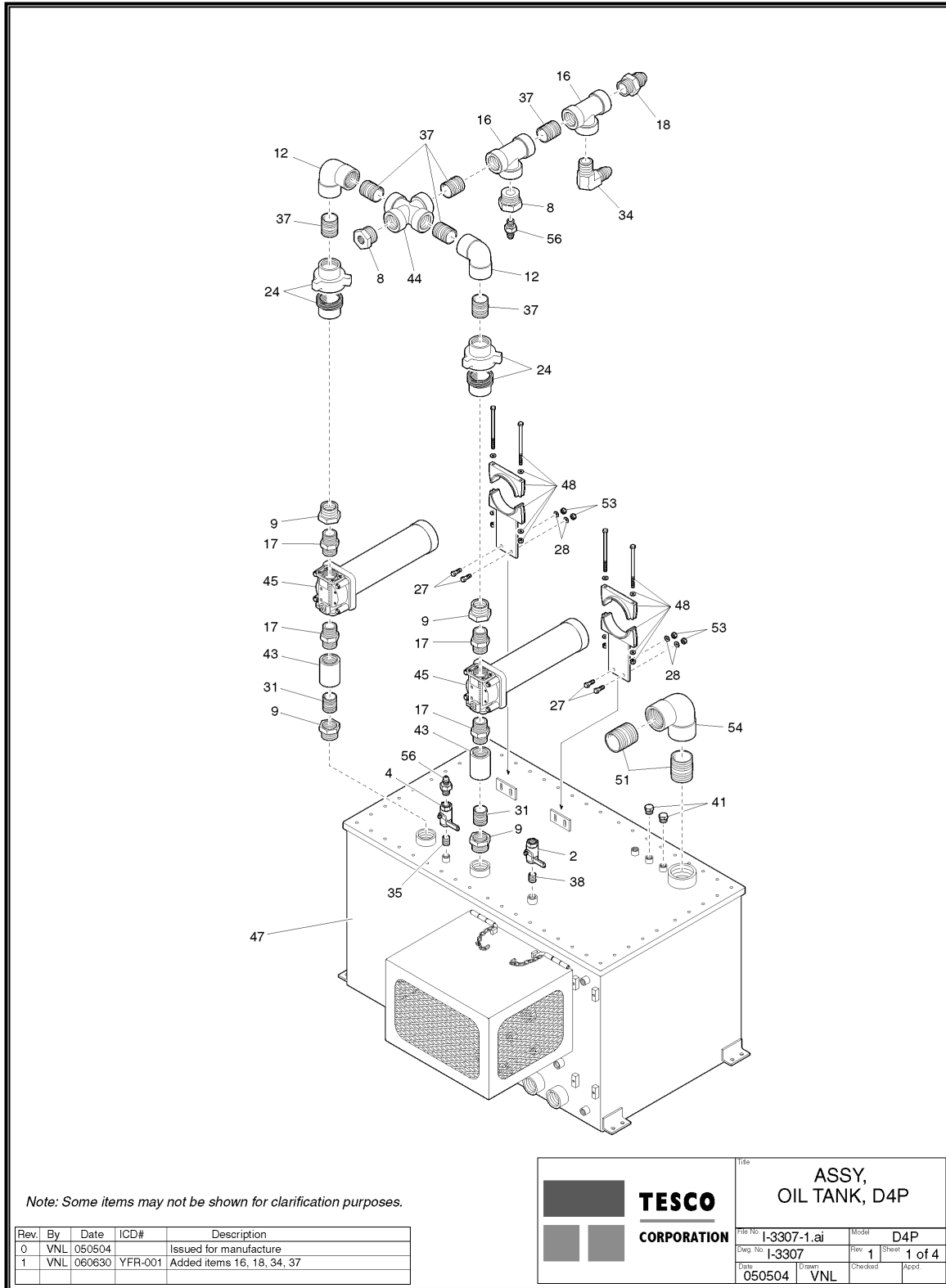
Refer: 1 Illustration

Drawing Title: Kit,Oil Tank Final Assembly,D4P



Item #	Tesco #	Qty	Description
1	0070	1	THERMOMETER,BIMETAL,0-250,1/2
2	0072	4	THERMO,304,S/S,1/2X3/4X6.0 LAG
3	0242	1	FTG,HYD,ELB,90D,1/2MPTX1/2MPT
4	730458	3	Switch,Temp,WP,80°F-205°F,SPDT
5			Not used
6	0425	1	COUPLING,QUICK,FF,FEMALE,3/8X1/2FNPT
7	1772	1	SWITCH,LEVEL,MURPHY,1-1/2NPT
8	2435	1	HEATER,TANK,480V,1.5KW,1 PH
9	2700	1	BREATHER,3/4" NPT, ABF3/10
10	3461	1	CAP,DUST,HYD,BLACK,F/FF FEM QUICK CPLG,3/8

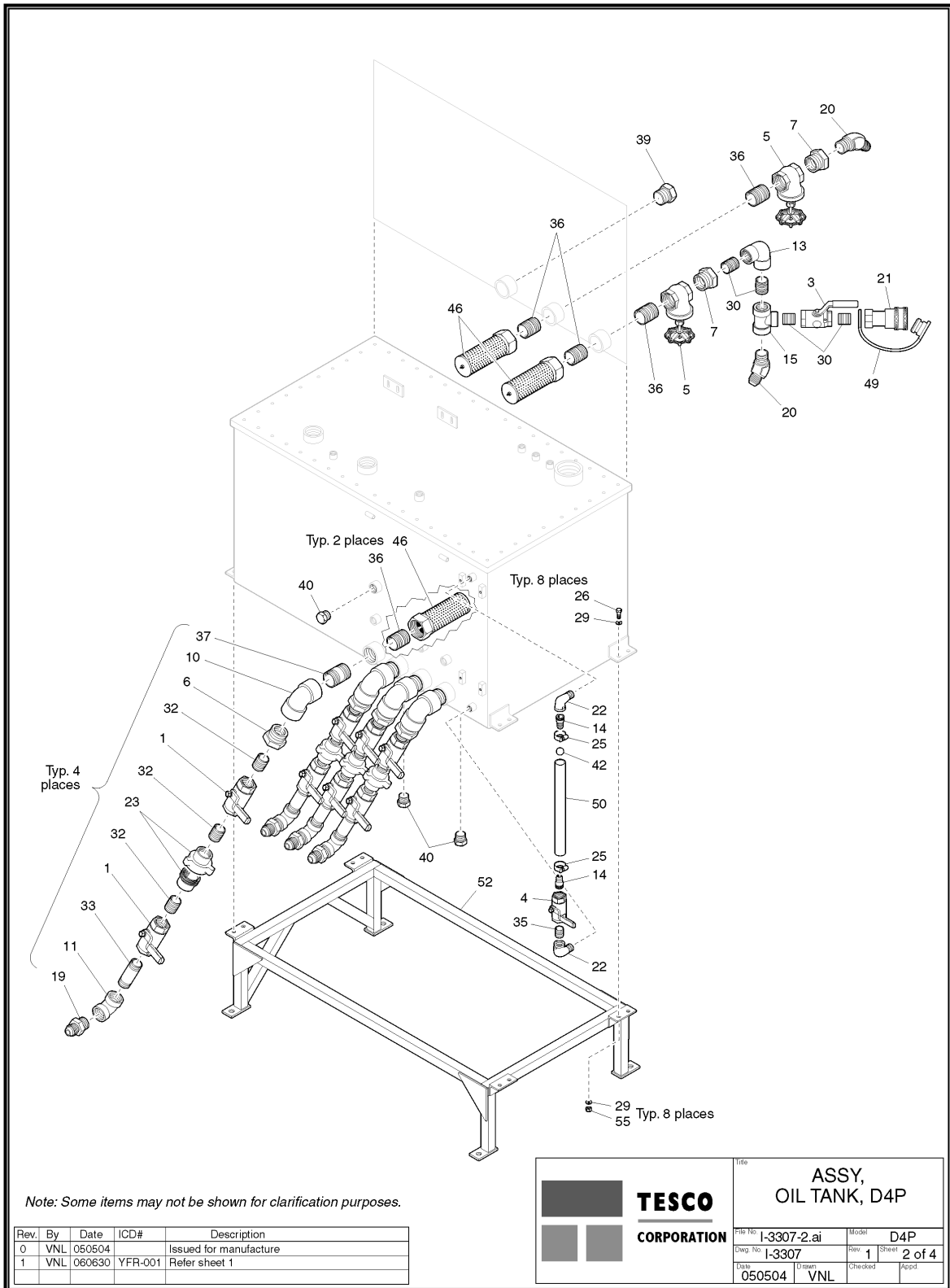
OIL TANK ASSEMBLY, D4P



Note: Some items may not be shown for clarification purposes.

Rev.	By	Date	ICD#	Description
0	VNL	050504		Issued for manufacture
1	VNL	060630	YFR-001	Added items 16, 18, 34, 37

		Title	
		ASSY, OIL TANK, D4P	
File No	I-3307-1.ai	Model	D4P
Dep. No	I-3307	Rev	1
Drawn	VNL	Checked	Appd
Date	050504		



Parts List



Part # 3307

Drawing # I-3307

Rev. 1

Pages 3 - 4 of 4

File # I-3307.xls

Refer: 2 Illustrations

Drawing Title: ASSY, OIL TANK, D4P

Item #	Tesco #	Qty	Description
1	0008	8	Valve,Ball,2-Way,2000-psi,WOG,1-1/4"FNPT
2	0009	1	Valve,Ball,2-Way,2000-psi,WOG,3/4"FNPTx3/4"FNPT
3	0013	1	Valve,Ball,2-Way,2000-psi,WOG,1"FNPTx1"FNPT
4	0015	2	Valve,Ball,2-Way,2000-psi,WOG,1/2"FNPTx1/2"FNPT
5	0016	2	Valve,Gate,200-psi WOG,2"FNPTx2"FNPT,Brass
6	0085	4	Fitting,Pipe,Reducer,6000-psi,1-1/4"FNPTx2"MNPT
7	0086	2	Fitting,Pipe,Reducer,6000-psi,1"FNPTx2"MNPT
8	0092	2	BUSHING,HEX,FS,2"X1/2"
9	0096	4	Fitting,Pipe,Bushing,Hex,1-1/2"FNPTx2"MNPT,FS
10	0109	4	Fitting,Pipe,45°Elb,2000-psi,2",FNPT
11	0111	4	Fitting,Pipe,45°Elb,2000-psi,1-1/4",FNPT
12	0125	2	Fitting,Pipe,90°Elb,2000-psi,2",FNPT
13	0140	1	Fitting,Pipe,90°Elb,2000-psi,1",FNPT
14	0147	2	Fitting,Pipe,1/2"Hose Endx1/2"MNPT,Pld
15	0170	1	Fitting,Pipe,Tee,2000-psi,1",FNPT
16	0173	2	Fitting,Pipe,Tee,2000-psi,2",FNPT
17	0225	4	Fitting,Hyd,Str,#24MORBx#24MNPT
18	17169	1	Fitting,Hyd,Str,#24MJICx#32MNPT
19	0297	4	Fitting,Hyd,Str,#20MJICx#20MNPT
20	0304	2	Fitting,Hyd,45°Elb,#16MJICx#16MNPT
21	0420	1	Disconnect,Quick,Coupler,72Series,1"x1"FNPT
22	0465	2	Fitting,Pipe,90°Elb,150-psi,1/2"FNPTx1/2"MNPT
23	0531	4	Union,Hammer,2000-psi CWP,1-1/4"xThd,FIG206
24	0536	2	Union,Hammer,2000-psi CWP,2"xThd,FIG206
25	0713	2	Clamp,Hose,Worm-Gear,5/16" to 3/4"
26	0988	8	Screw,Cap,Hex Hd,1/2"-13UNCx1-1/4",Gr8,Pld
27	1013	4	Screw,Cap,Hex Hd,3/8"-16UNCx1-1/4",Gr8,Pld
28	10632	4	Washer,Flat,Type A,Narrow,3/8",Hardened,Pld
29	1073	16	Washer,Flat,Type A,Narrow,1/2",Hardened,Pld
30	1300	4	Fitting,Pipe,Nipple,Sch80,1"MNPTxClose
31	1303	2	Fitting,Pipe,Nipple,Sch80,1-1/2"MNPTxClose
32	1307	12	Fitting,Pipe,Nipple,Sch80,1-1/4"MNPTxClose
33	15766	4	Fitting,Pipe,Nipple,Sch80,1-1/4"MNPTx5"Lg
34	0325	1	Fitting,Hyd,90°Elb,#32MJICx#32MNPT
35	1317	2	Fitting,Pipe,Nipple,Sch80,1/2"MNPTxClose

Parts List

Part # 3307

Drawing # I-3307

Rev. 1

Pages 3 - 4 of 4



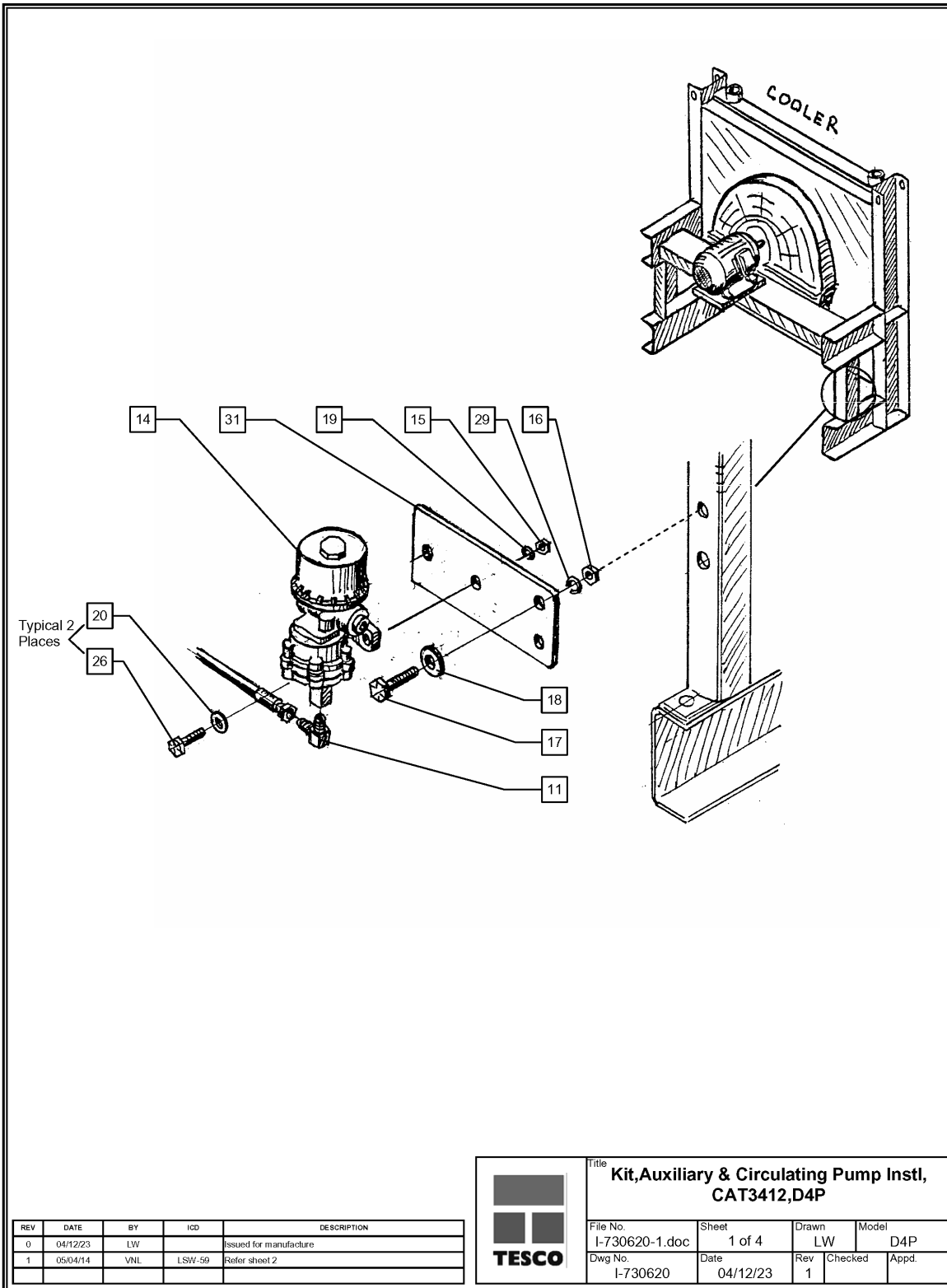
File # I-3307.xls

Refer: 2 Illustrations

Drawing Title: ASSY, OIL TANK, D4P

Item #	Tesco #	Qty	Description
36	1338	8	Fitting, Pipe, Nipple, Sch80, 2" MNPT x Close
37	1340	10	Fitting, Pipe, Nipple, Sch80, 2" MNPT x 2-1/2" Lg
38	1347	1	Fitting, Pipe, Nipple, Sch80, 3/4" MNPT x Close
39	1370	1	Fitting, Pipe, Plug, Hex Hd, 2" MNPT, FS
40	1372	3	Fitting, Pipe, Plug, Hex Hd, 1" MNPT
41	1375	2	Fitting, Pipe, Plug, Hex Hd, 1/2" MNPT
42	15417	1	FLOAT, SIGHT GLASS LEVEL INDICATOR, MCH SKID
43	2083	2	Fitting, Pipe, Coupling, Full, 3000-psi, 1-1/2", FNPT
44	2091	1	Fitting, Pipe, Cross, 2000-psi, 2", FNPT
45	2422	2	Filter, Return Line, Cartridge, 300psi, 100gpm
46	2707	6	STRAINER, MAGNETIC, HYD., 2" NPT
47	3322	1	TANK, OIL, CAT
48	3343	2	CLAMP, OIL TANK FILTER
49	4695	1	Plug, Quick Disconnect, Coupler, 72-Ser, 1", Yellow
50	4915	2 FT	Hose, Braided, 3/4" OD x 1/2" ID, PVC, Clear
51	6353	2	Fitting, Pipe, Nipple, Sch160, 3" MNPT x Close
52	6374	1	SUPPORT FRAME, D4P OIL TANK
53	720193	4	Nut, Hex, Lock, Spirallock, Flg, 3/8"-16SPL, Gr8, Pld
54	7730	1	Fitting, Pipe, 90° Elb, 2000-psi, 3", FNPT
55	9784	8	Nut, Hex, Lock, Nylon, 1/2"-13UNC, Gr8, Pld
56	0283	2	Fitting, Hyd, Str, #8MJIC x #8MNPT

Kit, Aux & Circulating Pump Instl, CAT3412, D4P

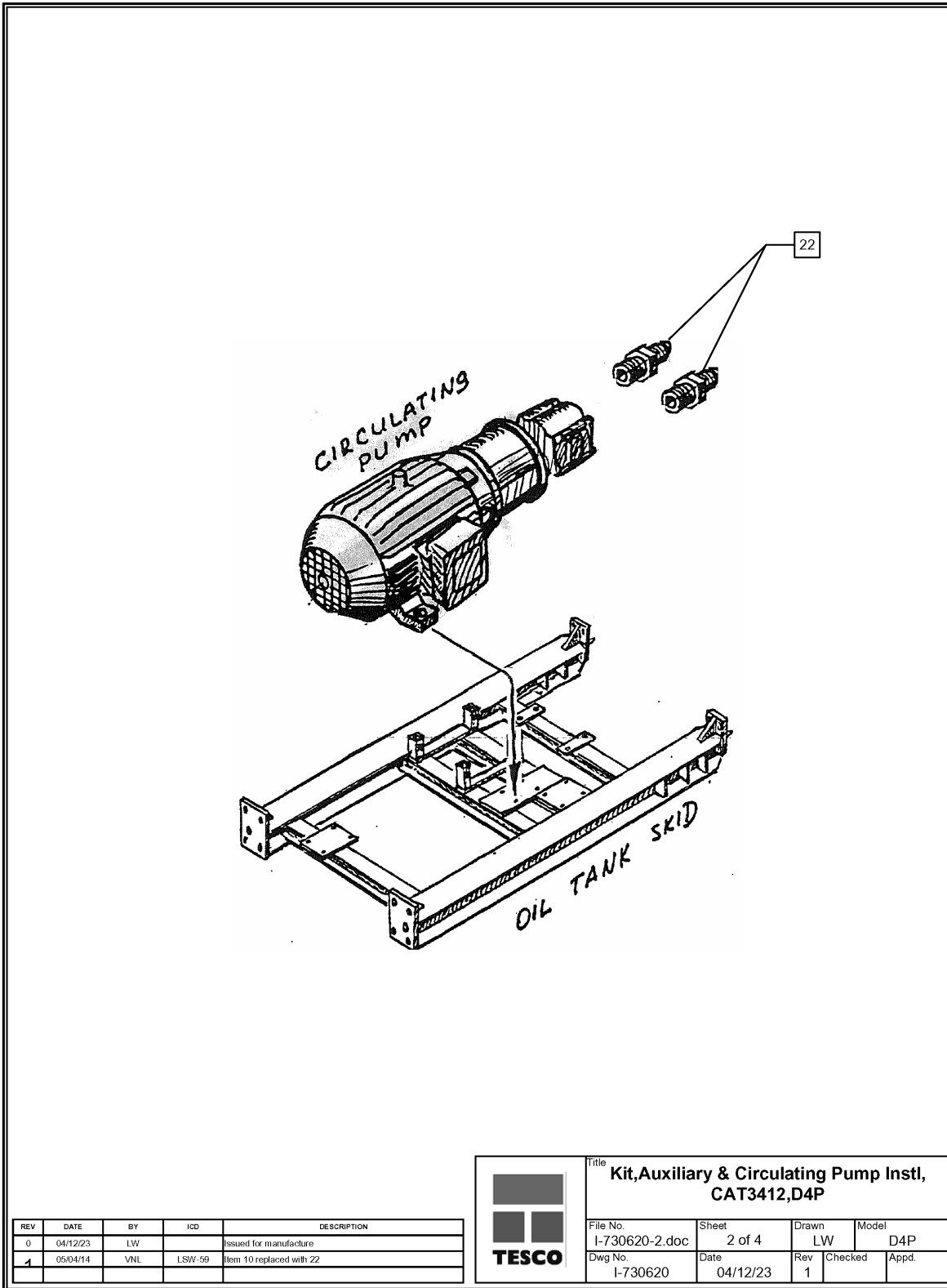


REV	DATE	BY	ICD	DESCRIPTION
0	04/12/23	LW		Issued for manufacture
1	05/04/14	VNL	LSW-59	Refer sheet 2



Title
**Kit, Auxiliary & Circulating Pump Instl,
CAT3412, D4P**

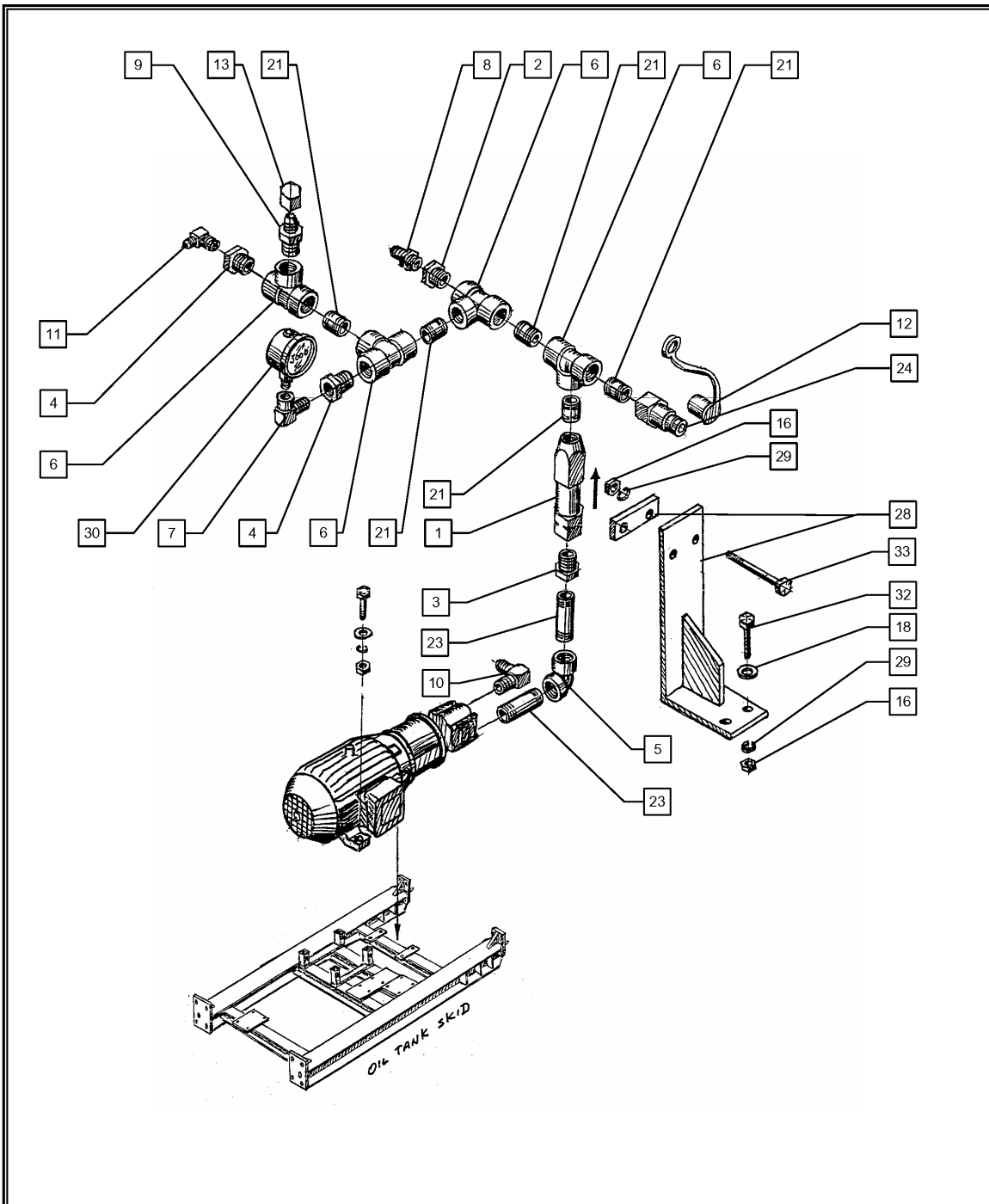
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Dwg No. I-730620	Date 04/12/23	Rev 1	Checked Appd.




REV	DATE	BY	ICD	DESCRIPTION
0	04/12/23	LW		Issued for manufacture
1	05/04/14	VNL	LSW-59	Item 10 replaced with 22



Kit, Auxiliary & Circulating Pump Instl, CAT3412, D4P				
File No.	Sheet	Drawn	Model	
I-730620-2.doc	2 of 4	LW	D4P	
Dwg No.	Date	Rev	Checked	Appd.
I-730620	04/12/23	1		



REV	DATE	BY	ICD	DESCRIPTION
0	04/12/23	LW		Issued for manufacture
1	05/04/14	VNL	LSW-59	Refer sheet 2

	Title Kit, Auxiliary & Circulating Pump Instl, CAT3412, D4P			
	File No. I-730620-3.doc	Sheet 3 of 4	Drawn LW	Model D4P
	Dwg No. I-730620	Date 04/12/23	Rev 1	Checked Appd.

Parts List



Part # 730620

Drawing # I-730620

Rev. 1

Page 4 of 4

File # I-730620.xls

Refer: 3 Illustrations

Drawing Title: Kit,Auxiliary & Circulating Pump Instl,CAT3412,D4P

Item #	Tesco #	Qty	Description
1	0026	1	VALVE,INLINE CHECK,1"FNPT,5PSI CRACKING
2	0089	1	BUSHING,HEX,FS,1"X1/2"
3	0093	1	BUSHING,HEX,FS,1"X3/4"
4	0099	2	BUSHING,HEX,FS,1"X1/4"
5	0143	1	ELBOW,PIPE,90 DEG,2000#,3/4"
6	0170	4	TEE,THR,2000#,NPT,1"
7	0254	1	FTG,HYD,ELB,90D,1/4MPTX1/4FPT
8	0283	1	FTG,HYD,STR,1/2MPTX1/2MJIC
9	0287	1	FTG,HYD,STR,1MPTX1MJIC
10	0322	1	FTG,HYD,ELB,90D,3/4MPTX1MJIC
11	0323	2	FTG,HYD,ELB,90D,1/4MPTX1/4MJIC
12	0394	1	CAP,DUST,HYD,BLACK,F/FF MALE QUICK CPLG,1
13	0402	1	FTG,HYD,CAP,1JIC,STEEL
14	0759	1	SWITCH,ASCO,PRES,XPPR,200-3500
15	0960	2	NUT,HEX,PLTD,NC,GR8,1/4"
16	0961	6	NUT,HEX,PLTD,NC,GR8,3/8"
17	1013	2	CAP,GR8,NC,PLT,3/8 X 1-1/4
18	10632	4	WASHER,FLAT,ALLOY PLTD,GR8,3/8
19	10634	2	WASHER,LOCK,GR8,PLTD,ALLOY,1/4
20	11467	2	WASHER,FLAT,ALLOY PLTD,GR8,1/4
21	1300	5	NIPPLE,THR,SCH80,1"XCL
22	0280	2	FTG,HYD,STR,3/4MPTX1MJIC
23	1350	2	NIPPLE,THR,SCH80,3/4"X3"
24	1989	1	COUPLING,QUICK,FF,MALE,1X1FNPT
25			NOT USED
26	4935	2	CAP,GR8,NC,PLT,1/4 X 1-1/4
27			NOT USED
28	6206	1	SUPPORT,AUX PUMP PLUMBING,D4P/D6P
29	7135	6	WASHER,LOCK,ALLOY,PLTD,3/8"
30	7353	1	GAUGE,CBM,3000PSI,2-1/2,1/4MNPT,LF
31	8404	1	MOUNT,SWITCH OIL TANK AUX,D6P
32	1011	2	CAP,GR8,NC,PLT,3/8 X 1-1/2
33	1007	2	CAP,GR8,NC,PLT,3/8 X 3

BOX, ELECTRICAL SHUTDOWN, HI-TEMP

NOTE 1: Engraving
 Prep: Grind Surface Smooth
 Font: Arial
 Size: 0.24"

1) SEE NOTE 1
 2) Text: 'B' & 'C' 24 VDC HIGH TEMP SHUT DOWN

1) SEE NOTE 1
 2) Text: 'B'

1) SEE NOTE 1
 2) Text: 'C'

ITEM #	QTY.	TESCO #	DESCRIPTION
11	8	2681	WASHER, LOCK, #6/32, PLATED, STD
10	8	14583	SCREW, RND HD, ROBERTSON, SS, 6/32X1/2
9	8	7253	NUT, HEX, NC, 18, 8SS, 6/32"
8	A/R	4096	HEAT SHRINK, 1/2, CLEAR, 4FT LONG
7	A/R	3800	WIRE, TEW, TINNED, WHITE, #14
6	1	0897	MOUNT, PANEL, MALE, MS3102A14S-5P
5	1	0888	MOUNT, PANEL, FEM, CR3102A14S-5S
4	2	0884	GASKET #14, MLT, PANEL, MT
3	2	0861	CAP, DUST, FEMALE, MS25043-14DA
2	1	0849	BOX, AL, 1/2" HUB, SINGLE, FS-1/2
1	A/R	0809	WIRE, TEW, TINNED BLACK, 14GA

REV	DATE	BY	ISSUED	DESCRIPTION
0	02/08/19	PE		

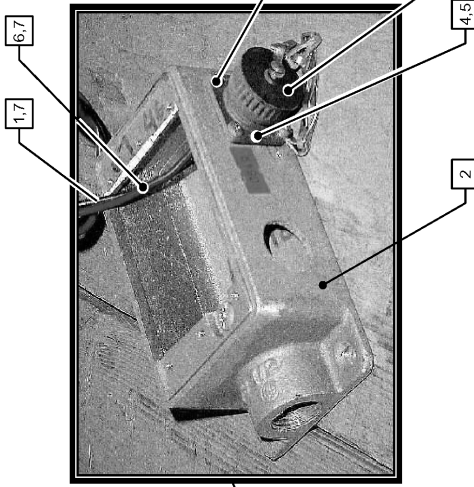
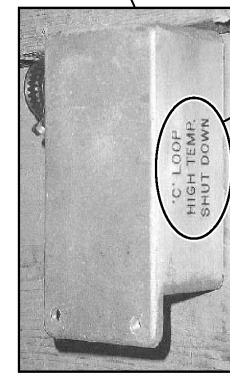
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I-6744-1.doc	1 of 1	PE	N/A
Dwg No.	Date	Rev	Checked
I-6744	02/08/19	0	Appd.

TESCO

BOX, ELEC, SHUTDOWN, HI-TEMP

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BOX, ELECTRICAL SHUTDOWN, HI-TEMP LOOP

1) SEE NOTE 1
 'C' LOOP
 HIGH TEMP
 SHUT DOWN

2) Text:

NOTE 1: Engraving
 Prep: Grind Surface Smooth
 Font: Arial
 Size: 0.24"

TESCO

BOX, ELECTRICAL SHUTDOWN, HI-TEMP LOOP

File No.	Sheet	Drawn	Model
I-6746-1.doc	1 of 1	PE	N/A
Dwg No.	Date	Rev	Checked
I-6746	02/08/23	0	Appd.

ITEM #	QTY.	TESCO #	DESCRIPTION
10	4	2681	WASHER, LOCK, #6/32, PLATED, STD
9	4	14583	SCREW, RND HD, ROBERTS, SS, 6/32X1/2
8	4	7253	NUT, HEX, NC, 18-8SS, 6/32"
7	AVR	4096	HEAT SHRINK, 1/2, CLEAR, 4FT LONG
6	AVR	3800	WIRE, TEW, TINNED, WHITE, #14
5	1	0897	MOUNT, PANEL, MALE, MS3102A14S-5P
4	1	0884	GASKET, #14, MIL T, PANEL MT
3	1	0861	CAP, DUST, FEMALE, MS25043-14DA
2	1	0849	BOX, AL, 1/2" HUB, SINGLE, FS-1/2
1	AVR	0809	WIRE, TEW, TINNED BLACK, 14GA

REV	DATE	BY	ICD	DESCRIPTION
0	02/08/23	PE		ISSUED

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BOX, ELECTRICAL SHUTDOWN, COOLING FAN

NOTE 1: Engraving
 Prep: Grind Surface Smooth
 Font: Arial
 Size: 0.24"

10	4	2681	WASHER, LOCK, #6/32, PLATED, STD		
9	4	14583	SCREW, RND HD, ROBERTSON, SS, 6/32X1/2		
8	4	7253	NUT, HEX, NC, 18, 8SS, 6/32"		
7	A/R	4096	HEAT SHRINK, 1/2", CLEAR, 4FT LONG		
6	A/R	3800	WIRE, TEW, TINNED, WHITE, #14		
5	1	0897	MOUNT, PANEL, MALE, MS3102A14S-5P		
4	1	0884	GASKET, #14, MIL T, PANEL MT		
3	1	0861	CAP, DUST, FEMALE, MS25043-14DA		
2	1	0849	BOX, AL, 1/2" HUB, SINGLE, FS-1/2		
1	A/R	0809	WIRE, TEW, TINNED BLACK, 14GA		
ITEM #	QTY.	TESCO #	DESCRIPTION		
REV	DATE	BY	ICD	ISSUED	DESCRIPTION
0	02/08/23	PE			

File No. I-6747-1.doc
Dwg No. I-6747
Sheet 1 of 1
Date 02/08/23
Drawn PE
Rev 0
Checked
Model N/A
Appd.

TESCO

Title
BOX, ELEC, SHUTDOWN, COOLING FAN

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BOX, ELECTRICAL SHUTDOWN CIRC/PUMP

REV.	DATE	BY	ISSUED	DESCRIPTION
0	02/08/23	PE		

ITEM #	QTY.	TESCO #	DESCRIPTION
10	4	2681	WASHER, LOCK #6/32, PLATED, STD
9	4	14583	SCREW, RND HD, ROBR TSN, SS, 6/32X1/2
8	4	7253	NUT, HEX, NC, 18-8SS, 6/32"
7	A/R	4096	HEAT SHRINK, 1/2, CLEAR, 4FT LONG
6	A/R	3800	WIRE, TEW, TINNED, WHITE, #14
5	1	0897	MOUNT, PANEL, MALE, MS3102A14S-5P
4	1	0884	GASKET, #14, MILT, PANEL MT
3	1	0861	CAP, DUST, FEMALE, MS25043-14DA
2	1	0849	BOX, AL, 1/2" HUB, SINGLE, FS-1/2
1	A/R	0809	WIRE, TEW, TINNED BLACK, 14GA

NOTE 1: Engraving
 Prep: Grind Surface Smooth
 Font: Arial
 Size: 0.24"

TESCO

Title			
BOX, ELEC, SHUTDOWN, CIRC/PUMP			
File No.	Sheet	Drawn	Model
I-6748-1.dwg	1 of 1	PE	N/A
Dwg No.	Date	Rev	Checked
I-6748	02/08/23	0	Appd.

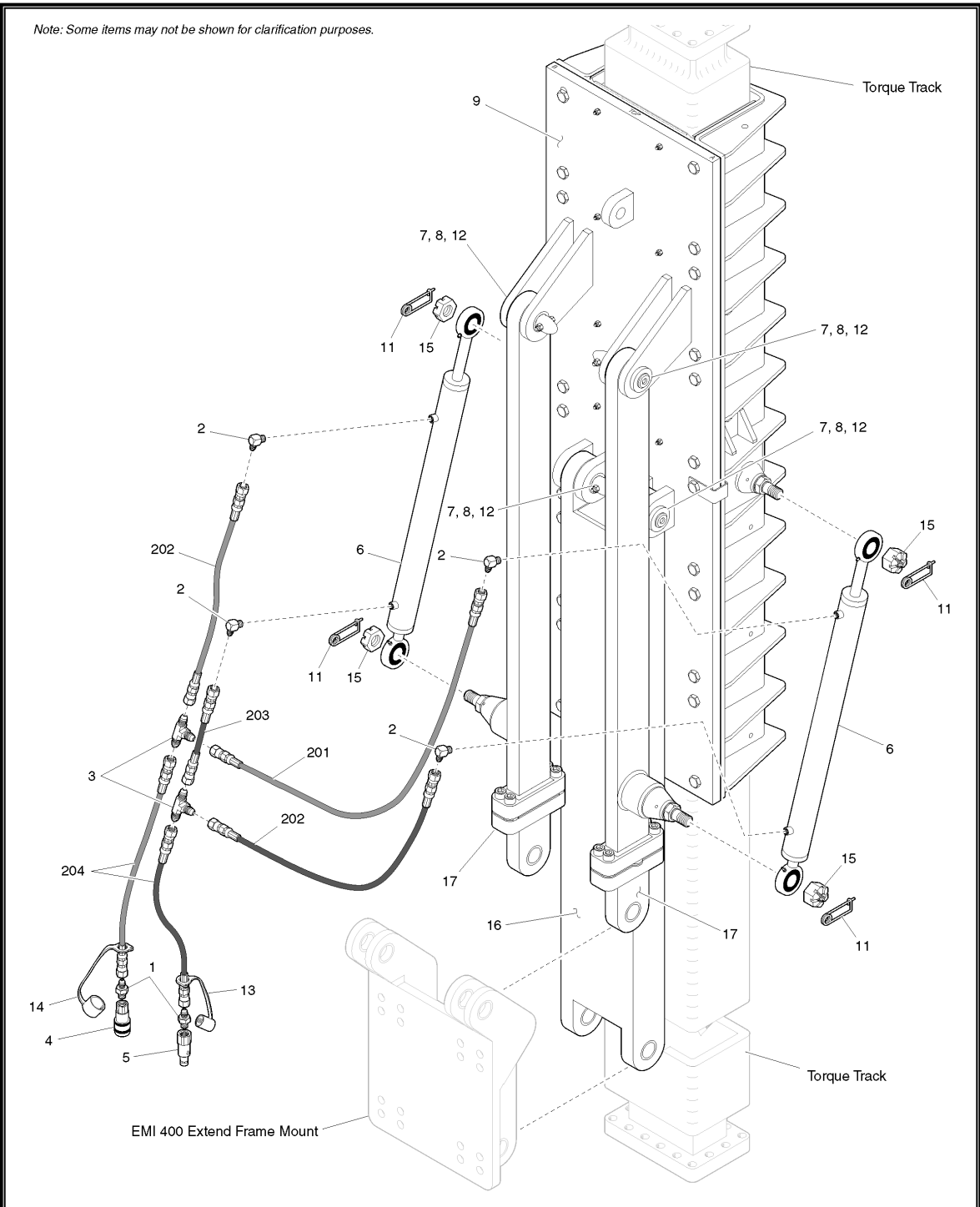
CHAPTER 4: TORQUE SYSTEM

This chapter contains the parts lists and accompanying illustrations for the torque system components of the 250TON HXI 700HP top drive system.

The illustrations are drawn from the off driller's side point of view.

TORQUE BUSHING, 72", c/w HYDRAULICS, EMI 400

Note: Some items may not be shown for clarification purposes.



Rev.	By	Date	ICD#	Description
A	VNL	060307		Issued for manufacture

		Title: Torque Bushing, 72", C/W Hydraulics, EMI 400	
		File No: 731144-1.ai	Model: EMI 400
Draw No: 731144		Rev: A	Sheet: 1 of 1
Draw: 060307	Drawn: VNL	Checked: [initials]	App: [initials]

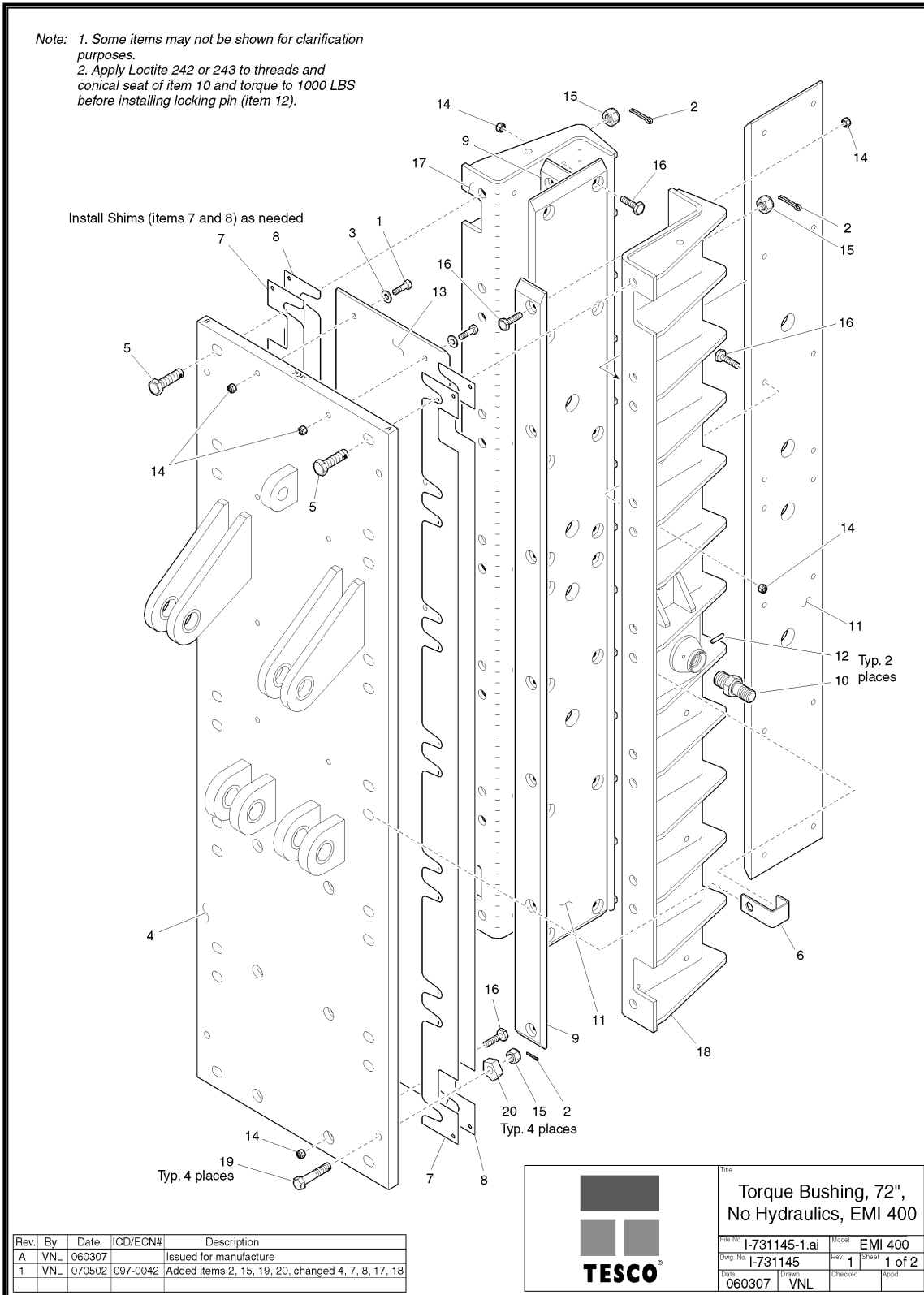
Detailed Bill of Material

731144 Rev A

Torque Bushing,72",C/W Hydraulics,EMI 400

Item	Qty	Units	Part Number	Description
1	2	EA	292	Fitting,Hyd,Str,#6MJICx#6MNPT
2	4	EA	316	Fitting,Hyd,90°Elb,#6MJICx#6MNPT
3	2	EA	368	Fitting,Hyd,Tee,#6MJICx#6MJICx#6MJIC
4	1	EA	411	Quick Disconnect,Coupler,3/8" x 3/8" FNPT,74 Series
5	1	EA	418	Quick Disconnect,Nipple,3/8" x 3/8" FNPT,74 Series
6	2	EA	926	Cylinder,Hyd,Sngl Stage,2.5"Bore,1.25"Rod,24"Stroke
7	4	EA	4333	Nut,Hex,Lock,Nylon,3/8"-16UNC,Gr8,Pld
8	4	EA	1010	Screw,Cap,Hex Hd,3/8"-16UNCx2",Gr 8,Pld
9	1	EA	731145 Rev A	Torque Bushing,72",No Hydraulics,EMI 400
10	0	EA	....	....
11	4	EA	2361	Pin,Safety,1/8"Wire-ODx3-1/8"Usable-Lg
12	4	EA	3384	Pin,Extend Arm,1.5"ODx6-1/4"lg
13	1	EA	3460	Cap,Quick Disconnect,Nipple,74-Ser,3/8"
14	1	EA	3461	Cap,Quick Disconnect,Coupler,74-Ser,3/8"
15	4	EA	4024	Nut,Hex,Slotted,1"-8UNC,Gr2,Modified
16	1	EA	980013 Rev A	Frame,Extend,Torque Bushing,EMI 400
17	2	EA	820111 Rev A	Arm,Extend,Adjustable,EMI 400
18	0	EA	....	....
19	0	EA	....	....
200	1	EA	17109	Kit,Hoses,Hyd,Torque Bushing,HMI/EMI
201	EA	3419	Hose,Hyd,100R2-AT,#6x56",FJICxFJIC	....
202	EA	3465	Hose,Hyd,100R2-AT,#6x34",FJICxFJIC	....
203	EA	3567	Hose,Hyd,100R2-AT,#6x8",FJICxFJIC	....
204	EA	3619	Hose,Hyd,100R2-AT,#6x70",FJICxFJIC	....

TORQUE BUSHING, 72", NO HYDRAULICS, EMI 400



Parts List

Part # 731145

Drawing # I-731145

Rev. 1

Page 2 of 2



File # I-731145.xls

Refer: 1 Illustration

Drawing Title: Torque Bushing,72",No Hydraulics,EMI 400

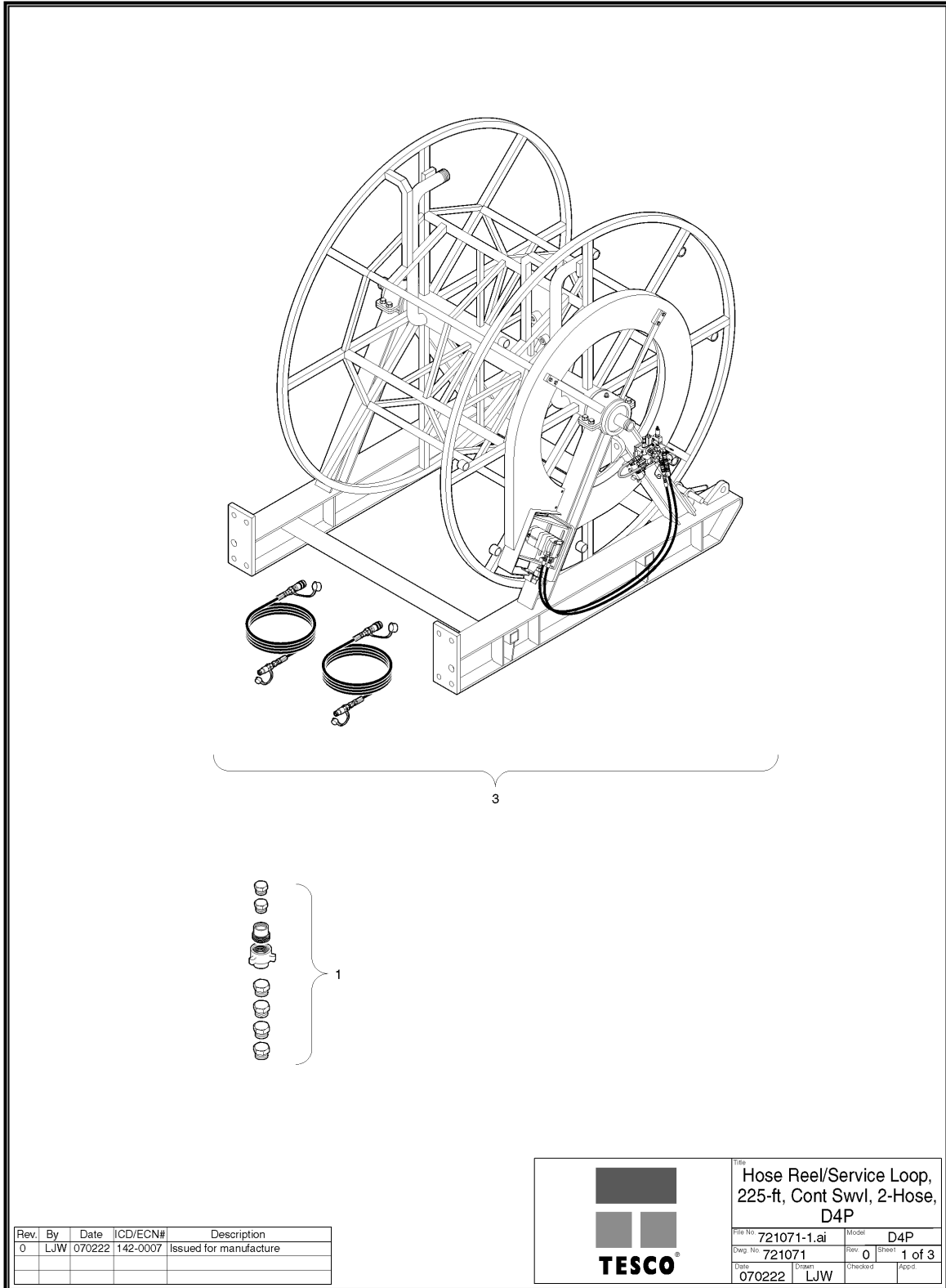
Item #	Tesco #	Qty	Description
1	1010	8	Screw, Cap, Hex Hd, 3/8"-16UNCx2", Gr8, Pld
2	1092	28	Pin, Cotter, 5/32"ODx1-1/2"Lg, Pld
3	13721	8	Washer, Flat, Type A, Wide, 3/8", Hardened, Pld
4	980011	1	Plate, Front, 72"Torque Bushing, EMI 400
5	3493	24	Screw, Cap, Hex Hd, 3/4"-10UNCx3-1/2", Gr8, Pld, Dr Thd
6	3831	2	BRACKET, TORQUE BUSHING, SHIM RETAINER
7	3832	4	Shim, Torque Bushing, Std, 1/8"Thkx4"Wx72"Lg
8	3833	4	Shim, Torque Bushing, Std, 1/16"Thkx4"Wx72"Lg
9	3834	2	LINER, BACK, UHMW, 3/4X2-3/4X72, STD TORQUE BUSHING
10	18109	2	Stem, Breakaway Mount, Cylinder
11	3835	2	LINER, SIDE, UHMW, 3/4X8X72, STD TORQUE BUSHING
12	810003	2	Pin, Spring, Coiled, 3/16"ODx1"Lg
13	3836	1	LINER, FRONT PLATE, UHMW, 3/4X12X72, STD TORQUE BUSH
14	4333	56	Nut, Hex, Lock, Nylon, 3/8"-16UNC, Gr8, Pld
15	7841	28	Nut, Hex, Lock, Nylon, 3/4"-10UNC, Gr8, Pld
16	8951	48	Screw, Cap, Hex Hd, 7/8"Wide HD, 3/8"-16UNCx1-1/2", Pld
17	980009	1	Plate, Side, DS, 72"Torque Bushing, EMI 400
18	980010	1	Plate, Side, ODS, 72"Torque Bushing, EMI 400
19	3467	4	Screw, Cap, Hex Hd, 3/4"-10UNCx4", Gr8, Pld, Dr Thd
20	970147	4	Adjuster, Torque Bushing, Side Plate

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CHAPTER 5: HOSE REEL/SERVICE LOOP

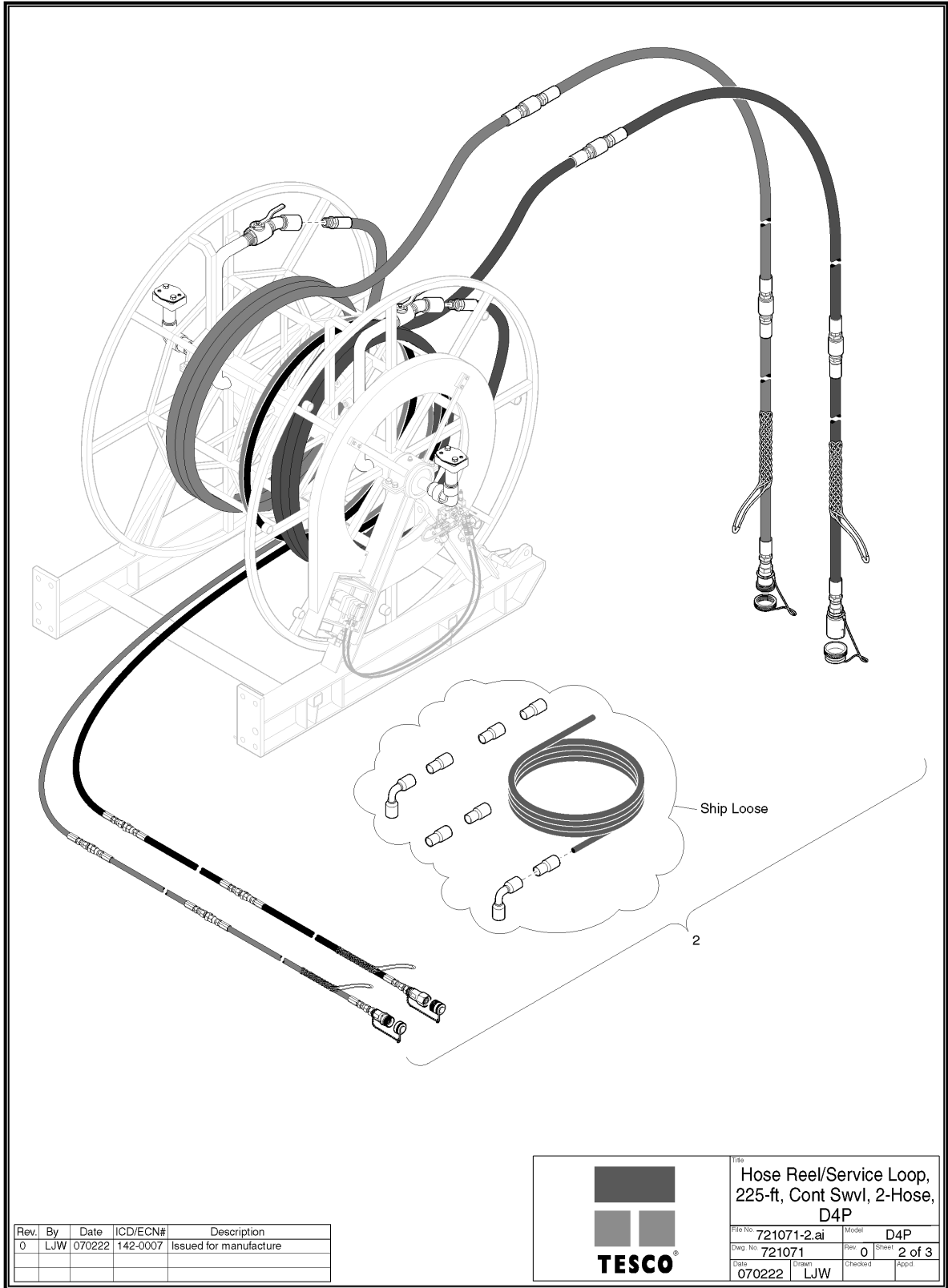
This chapter contains the parts lists and accompanying illustrations for the 250TON HXI 700HP top drive Hose Reel and Service Loop.

HOSE REEL/SERVICE LOOP, 225-FT, CONT SWVL, D4P



Rev	By	Date	ICD/ECN#	Description
0	LJW	070222	142-0007	Issued for manufacture

		Title Hose Reel/Service Loop, 225-ft, Cont Swvl, 2-Hose, D4P	
		File No. 721071-1.ai	Model D4P
Dwg. No. 721071	Rev. 0	Sheet 1 of 3	
Date 070222	Drawn LJW	Checked []	Appd. []



Rev.	By	Date	ICD/ECN#	Description
0	LJW	070222	142-0007	Issued for manufacture

		Title	
		Hose Reel/Service Loop, 225-ft, Cont Swvl, 2-Hose, D4P	
File No	721071-2.ai	Model	D4P
Dwg No	721071	Rev	0
Date	070222	Drawn	LJW
		Checked	
		Appd	
		Sheet	2 of 3

Parts List



Part # 721071

Drawing # I-721071

Rev. 0

Page 3 of 3

File # I-721071.xls

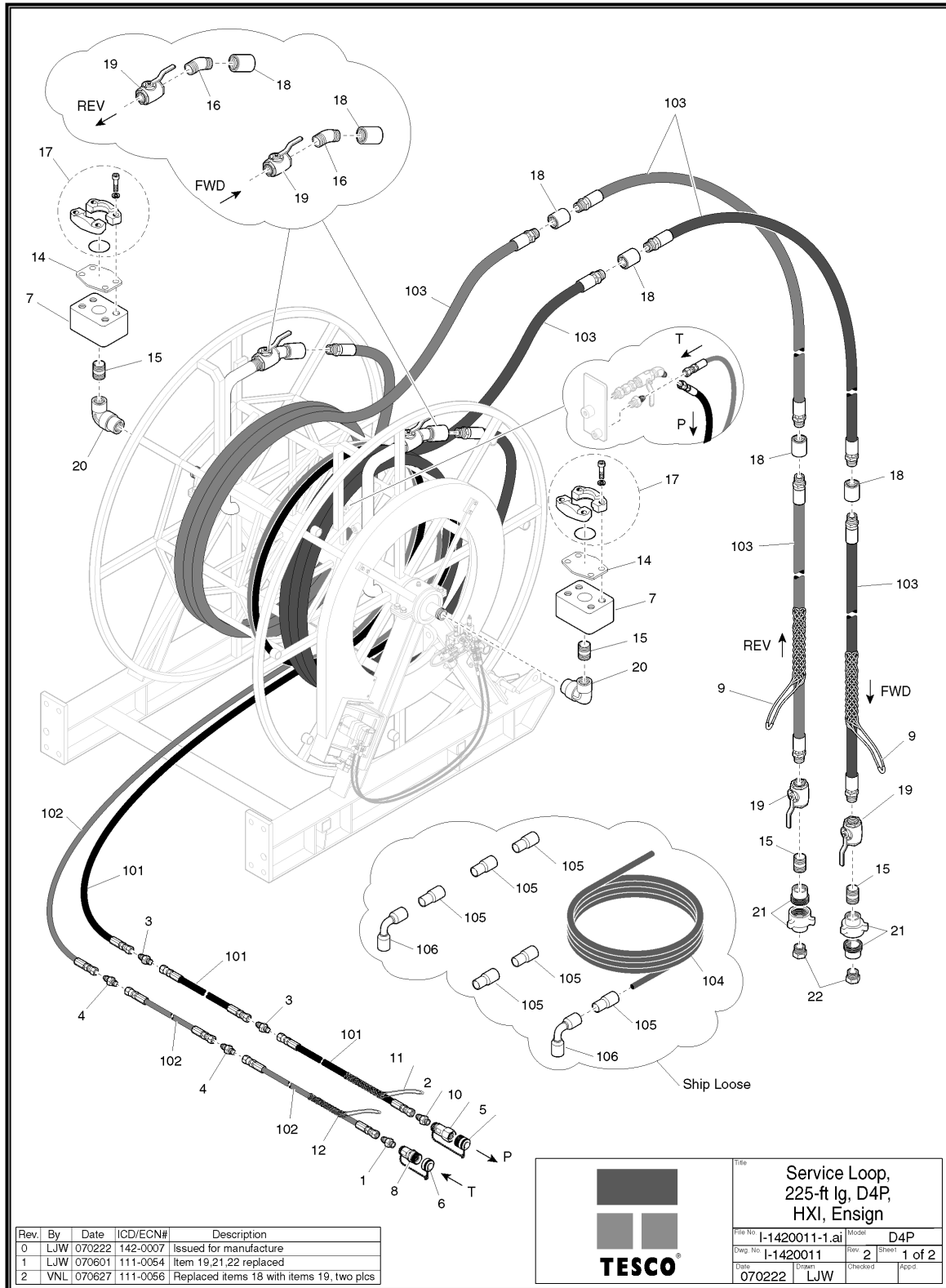
Refer: 2 Illustrations

Drawing Title: Hose Reel/Service Loop,225-ft,Cont Swvl,2-Hose,HXI,D4P

Item #	Tesco #	Qty	Description
1	13887	1	KIT,SHIP LOOSE ITEMS,D6P,16V2000,DD
2	1420011	1	Service Loop,225-ft lg,HXI,D4P
3	731077	1	Hose Reel,Cont Swivel,c/w Controls,D4P

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SERVICE LOOP, 225-FT LG, HXI, D4P



Parts List



Part # 1420011

Drawing # I-1420011

Rev. 2

Page 2 of 2

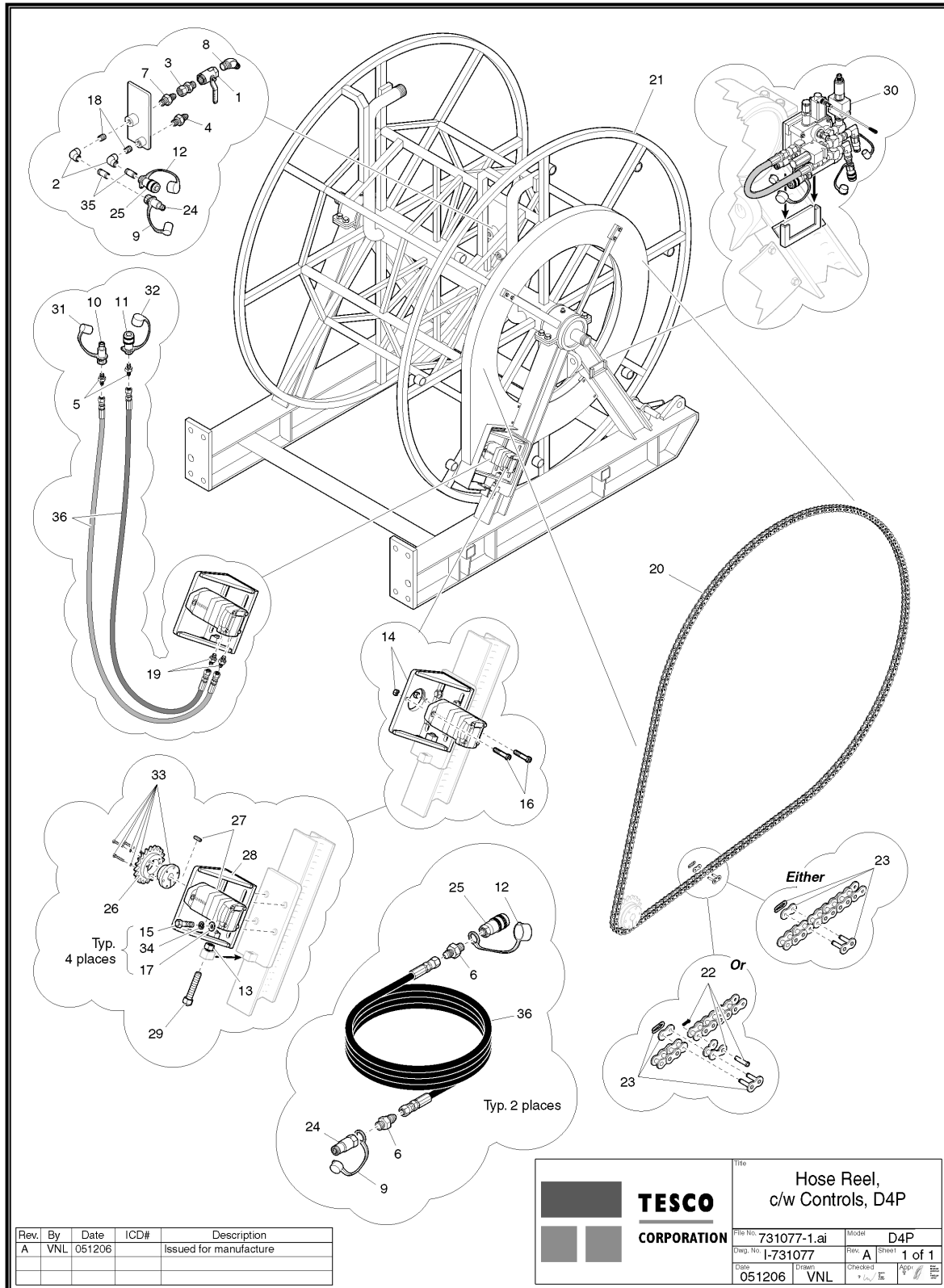
File # I-1420011.xls

Refer: 1 Illustration

Drawing Title: Service Loop,225-ft lg,HXI,D4P, Ensign

Item #	Tesco #	Qty	Description
1	0293	1	Fitting, Hyd, Str, #12MJICx#16MNPT
2	0294	1	Fitting, Hyd, Str, #20MJICx#16MNPT
3	0331	2	Fitting, Hyd, Str, #20MJICx#20MJIC
4	0335	2	Fitting, Hyd, Str, #12MJICx#12MJIC
5	0387	1	Plug, Quick Disconnect, Coupler, 78-Ser, 1"
6	0389	1	Cap, Quick Disconnect, Nipple, 78-Ser, 1"
7	1420010	2	Flange, Companion Face, 2"NPTx2"C62
8	2008	1	Disconnect, Quick, Nipple, 78Series, 1"x1"FNPT
9	2427	2	Grip, Cable, 3260lb, (2.50"-2.99"), 1 Eye, Lace Closing
10	2895	1	Disconnect, Quick, Coupler, 78Series, 1"x1"FNPT
11	4576	1	Grip, Cable, 1610lb, (1.50"-1.74"), 1 Eye, Lace Closing
12	4889	1	Grip, Cable, 3260lb, (2.00"-2.49"), 1 Eye, Lace Closing
13			Not used
14	1420008	2	Cover Plate, Protective, C62, 2"
15	7597	4	Fitting, Pipe, Nipple, Sch 160, 2"MNPTx2-1/2"Lg
16	7644	2	ASSY, ELBOW, 2X45DEG, H/REEL, HCI
17	11298	2	KIT, FLANGE, SPLIT, C62, 2"
18	8764	6	Fitting, Pipe, Coupling, Full, 6000-psi, 2"FNPT
19	7456	4	VALVE, FULL PORT BALL, 5000PSI, 2"NPT
20	17740	2	Fitting, Hyd, 90°Elb, Cont Swvl, 2"FNPTx2"FNPT, 6000psi
21	7897	2	Union, Hammer, 15000-psi CWP, 2"xThd, FIG1502
22	1370	2	Fitting, Pipe, Plug, Hex Hd, 2"MNPT, FS
100	1420013	1	Kit, Hoses, Hyd, Service Loop, HXI, D4P
101	1133	3	Hose, Hyd, 100R2-AT, #20x900", FJICxFJIC
102	5317	3	Hose, Hyd, 100R2-AT, #12x75', FJICxFJIC
103	8385	6	Hose, Fwd/Rev, 5000-lb, #32x75', Service Loop, D6P
104	1420014	35ft	Hose, Hyd, 100R13, #32, 5000-psi, Parker
105	1420015	6	Fitting, Hose End, Crimp, Str, #32-C62x#32Hose
106	1420016	2	Fitting, Hose End, Crimp, 90°Elb, #32-C62x#32Hose

HOSE REEL, CONT SWIVEL, C/W CONTROLS, D4P



Rev.	By	Date	ICD#	Description
A	VNL	051206		Issued for manufacture

		Title	
		Hose Reel, c/w Controls, D4P	
Dwg. No.	731077-1.ai	Model	D4P
Date	051206	Rev.	A
Drawn	VNL	Sheet	1 of 1
Checked		App.	

Detailed Bill of Material

**731077 Rev A
Hose Reel,Cont Swivel,c/w Controls,D4P**

Item	Qty	Units	Part Number	Description
1	1	EA	8	Valve,Ball,2-Way,2000-psi,WOG,1-1/4"FNPTx1-1/4"FNPT
2	2	EA	135	Fitting,Pipe,90°Elb,3000-psi,1",FNPT
3	1	EA	215	Fitting,Hyd,Str,#20MNPTx#20FJIC
4	1	EA	281	Fitting,Hyd,Str,#12 MNPTx#12 MJIC
5	2	EA	283	Fitting,Hyd,Str,#8MJICx#8MNPT
6	4	EA	287	Fitting,Hyd,Str,#16MJICx#16MNPT
7	1	EA	297	Fitting,Hyd,Str,#20MJICx#20MNPT
8	1	EA	303	Fitting,Hyd,45°Elb,#20MJICx#20MNPT
9	3	EA	394	Cap,Quick Disconnect,Nipple,FF-Ser,1"
10	1	EA	421	Quick Disconnect,Nipple,3/8"x 1/2" FNPT,74 Series
11	1	EA	425	Quick Disconnect,Coupler,FF,3/8" x 1/2" FNPT,74 Series,Sleeve Lock
12	3	EA	442	Cap,Quick Disconnect,Coupler,FF-Ser,1"
13	1	EA	964	Nut,Hex,3/4"-10UNC,Gr8,Pld
14	2	EA	968	Nut,Hex,1/2"-13UNC,Gr8,Pld
15	4	EA	988	Screw,Cap,Hex Hd,1/2"-13UNCx1-1/4",Gr8,Pld
16	2	EA	1047	Screw,Cap,Skt Hd,1/2"-13UNCx2"
17	4	EA	1077	Washer,Flat,Type A,Wide,1/2",Low Carbon,Pld
18	2	EA	1300	Nipple,Thr,SCH80,1"xCL
19	2	EA	1496	Fitting,Hyd,Str,#10 MORBx#8 MJIC
20	1	EA	15474	Chain,Roller,60-1Rx15FT
21	1	EA	731078 Rev A	Skid Assy,Hose Reel,Cont Swivel,D4P
22	1	EA	1835	Link,Off Set,60-1R Roller Chain
23	1	EA	1836	Link,Connecting,60-1R Roller Chain
24	3	EA	1989	Quick Disconnect,Nipple,FF Series,1" x 1" FNPT
25	3	EA	1998	Quick Disconnect,Coupler,FF Series,1" x 1" FNPT
26	1	EA	2618	Sprocket,3/4" Pitch,Single - Type QD,20 Teeth
27	1	EA	2771	MOTOR,HYD.CHAR-LYNN,104-1143
28	1	EA	3323	Mount,Hydraulic Motor
29	1	EA	3328	Tightener,Chain,3/4" x 6" Long
30	1	ASSY	3335	Reel Motor Control Assy,HMI,ECI/EMI
31	1	EA	3460	Cap,Quick Disconnect,Nipple,74-Ser,3/8"
32	1	EA	3461	Cap,Quick Disconnect,Coupler,74-Ser,3/8"
33	1	EA	3808	Bushing,QD,SDS 1.00" Bore
34	6	EA	5881	Washer,Lock,Helical Spring,1/2",Alloy,Pld
35	2	EA	6352	Fitting,Pipe,Nipple,Sch80,1"MNPTx2-1/2"Lg
36	1	EA	720498	Kit,Hoses,Hyd,Controls,Hose Reel,D6P

TENSIONER, CHAIN, SERVICE LOOP

Paint Specification:
Paint Tesco BLUE as per STD0009

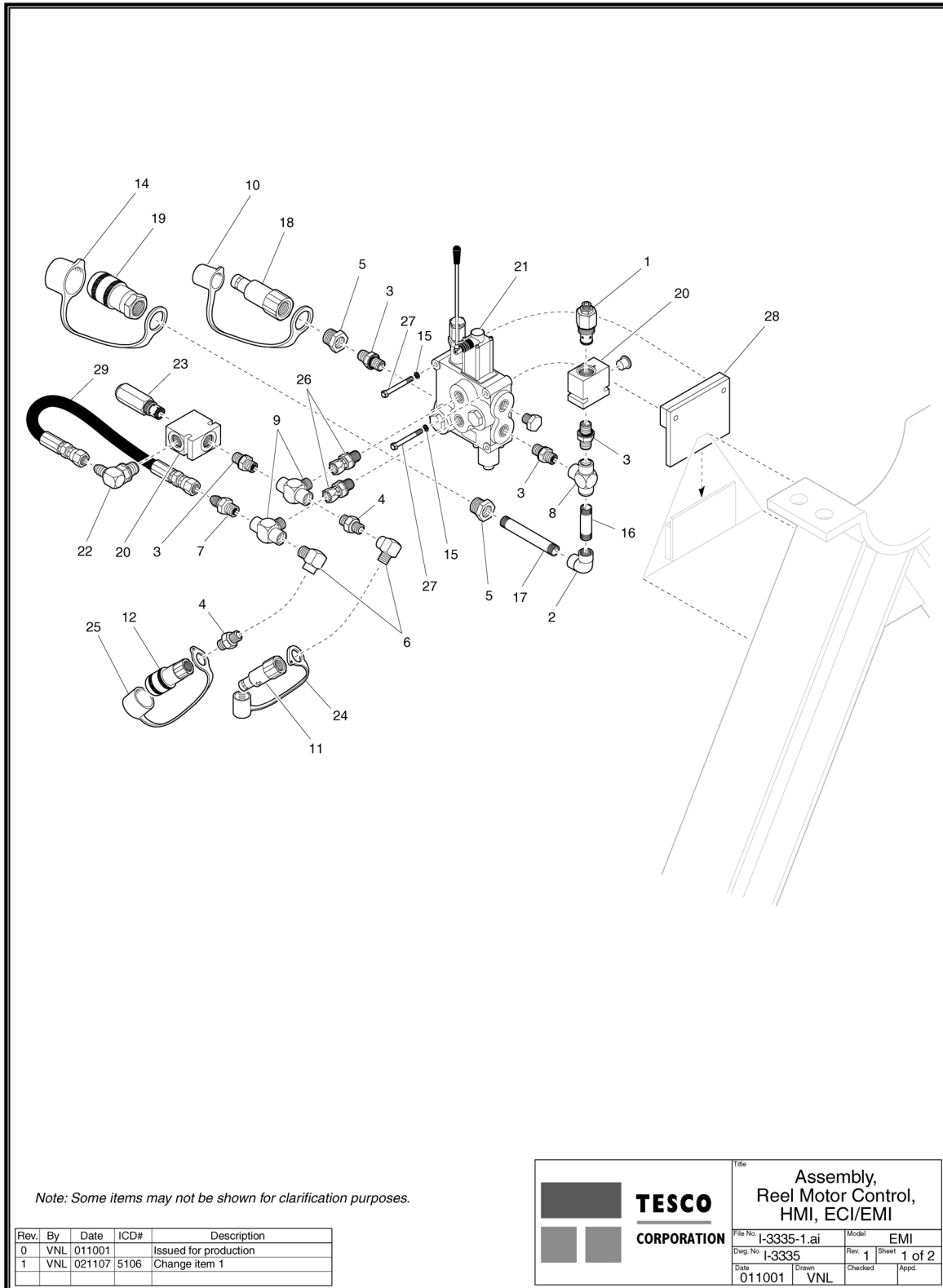
Item	Qty	Tesco#	Description
2	1		ROD, THR., ALLOY, NC, PLTD, 3/4X6"
1	1	0964	NUT, HEX, PLTD, NC, GR8, 3/4"

File	TIGHTEN, CHAIN, 3/4" X 6"				
File No.	I-3328-1-0.doc	Sheet	1 of 1	Model	D2P
Drawn	P.E.	Date	2002/03/21	Rev	0
Checked		Appr.			

REV	DATE	BY	ISSUED	DESCRIPTION
0	02/02/02	P.E.	ISSUED	

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REEL MOTOR CONTROL ASSY, HMI, ECI/EMI



Rev.	By	Date	ICD#	Description
0	VNL	011001		Issued for production
1	VNL	021107	5106	Change item 1

		Title	
		Assembly, Reel Motor Control, HMI, ECI/EMI	
File No.	I-3335-1.ai	Model	EMI
Dwg. No.	I-3335	Rev.	1
		Sheet	1 of 2
Date	011001	Drawn	VNL
		Checked	
		Appd.	



Parts List

Part #	3335
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Drawing # I-3335

Rev. 1

Refer: 1 Illustration

File # I-3335.xls

Page 2 of 2

Drawing Title: Assembly, Reel Motor Control, HMI, ECI/EMI

Item #	Tesco #	Qty	Description
1	16245	1	VALVE,RELIEF,100-250 PSI,VENT/ ATMOSPHERE
2	0128	1	Fitting,Pipe,90°Elb,2000-psi,1/2",FNPT
3	0230	4	Fitting,Hyd,Str,#8MORBx#8MNPT
4	0235	2	Fitting,Hyd,Str,#8MNPTx#8MNPT
5	0248	2	Fitting,Hyd,Str,#16MNPTx#8FNPT
6	0258	2	Fitting,Hyd,90°Elb,#8MNPTx#8FNPT
7	0284	1	Fitting,Hyd,Str,#6MJICx#8MNPT
8	0361	1	Fitting,Hyd,Tee,#8FNPTx#8FNPTx#8FNPT
9	0380	2	Fitting,Hyd,Tee,#8FNPTx#8FNPTx#8MNPT-Br
10	0394	1	Cap,Quick Disconnect,Nipple,FF-Ser,1",Black
11	0421	1	Disconnect,Quick,Nipple,74Series,3/8"x1/2"FNPT
12	0425	1	Disconnect,Quick,Coupler,74Series,3/8"x1/2"FNPT
13			Not used
14	0442	1	Cap,Quick Disconnect,Coupler,FF-Ser,1",Black
15	1068	2	Washer,Lock,Helical Spring,1/4",Stl,Pld
16	1314	1	Fitting,Pipe,Nipple,Sch80,1/2"MNPTx3"Lg
17	1315	1	NIPPLE,THR,SCH80,1/2"X5"
18	1989	1	Disconnect,Quick,Nipple,FF-Series,1"x1"FNPT
19	1998	1	Disconnect,Quick,Coupler,FF-Series,1"x1"FNPT
20	2021	2	Body,Cartridge,Relief,2 Way,#8 SAE
21	2194	1	VALVE,DIR. CONTROL,MANUAL
22	2788	1	Fitting,Hyd,90°Elb,#6MJICx#8MORB
23	2902	1	Valve,Relief,Bi-Dir,Cart,10 gpm,600-3600 psi
24	3460	1	Cap,Quick Disconnect,Nipple,74-Ser,3/8",Black
25	3461	1	Cap,Quick Disconnect,Coupler,74-Ser,3/8",Black
26	3501	2	Fitting,Hyd,Str,#8MORBx#8FNPT-Swvl
27	3695	2	Screw,Cap,Hex Hd,1/4"-20UNCx2-1/2",Gr8,Pld
28	5087	1	INSERT,CONTROL MOUNT
29	5096	1	Hose,Hyd,100R2-AT,#6x14",FJICxFJIC

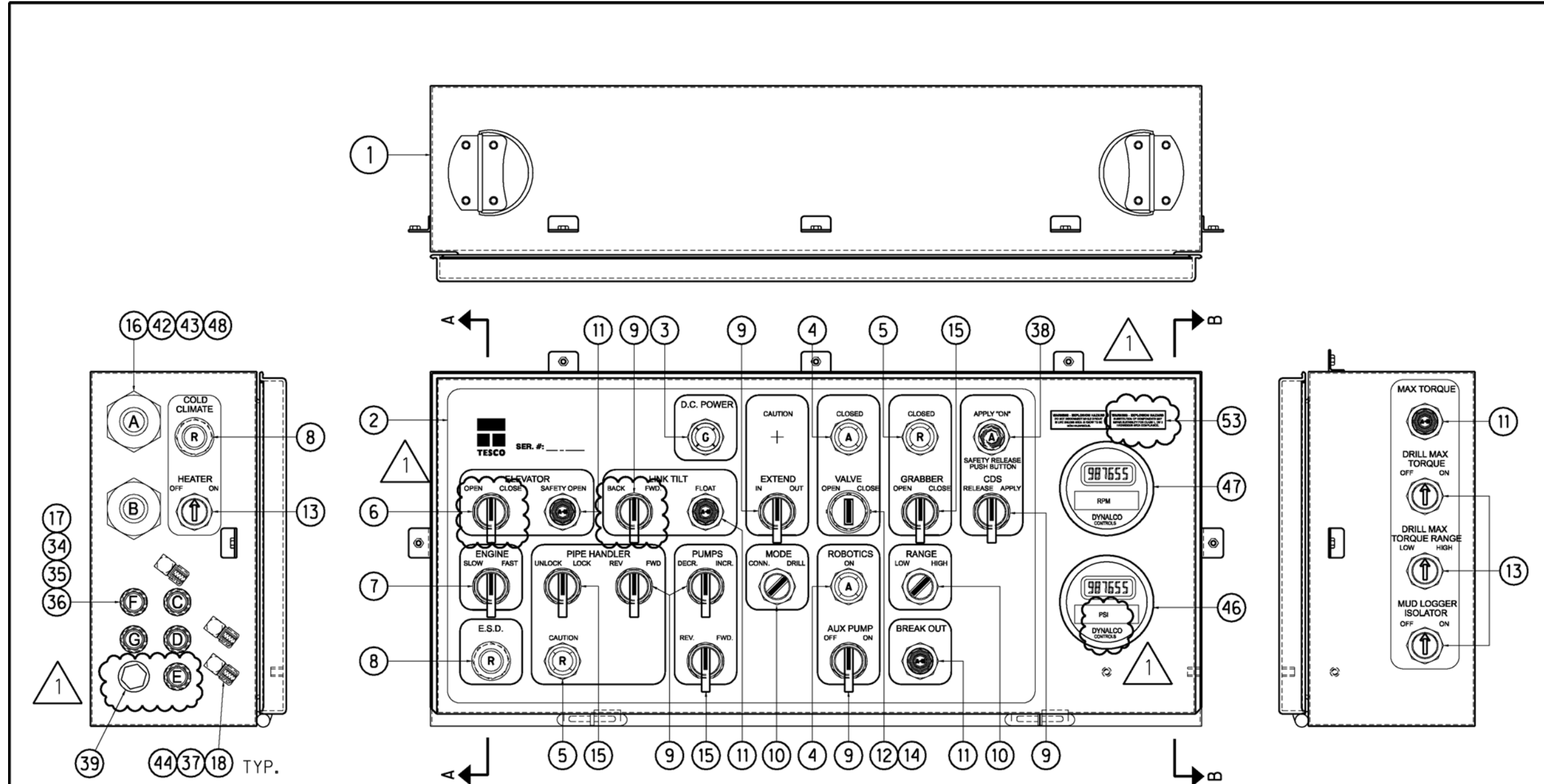
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CHAPTER 6: DRILLER'S PANEL

This chapter contains the parts lists and accompanying illustrations for the Driller's Panel components of the 250TON HXI 700HP top drive.

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DRILLER'S PANEL, 24 VDC, 30.5MM, RELAY LOGIC, 250-HXI-700

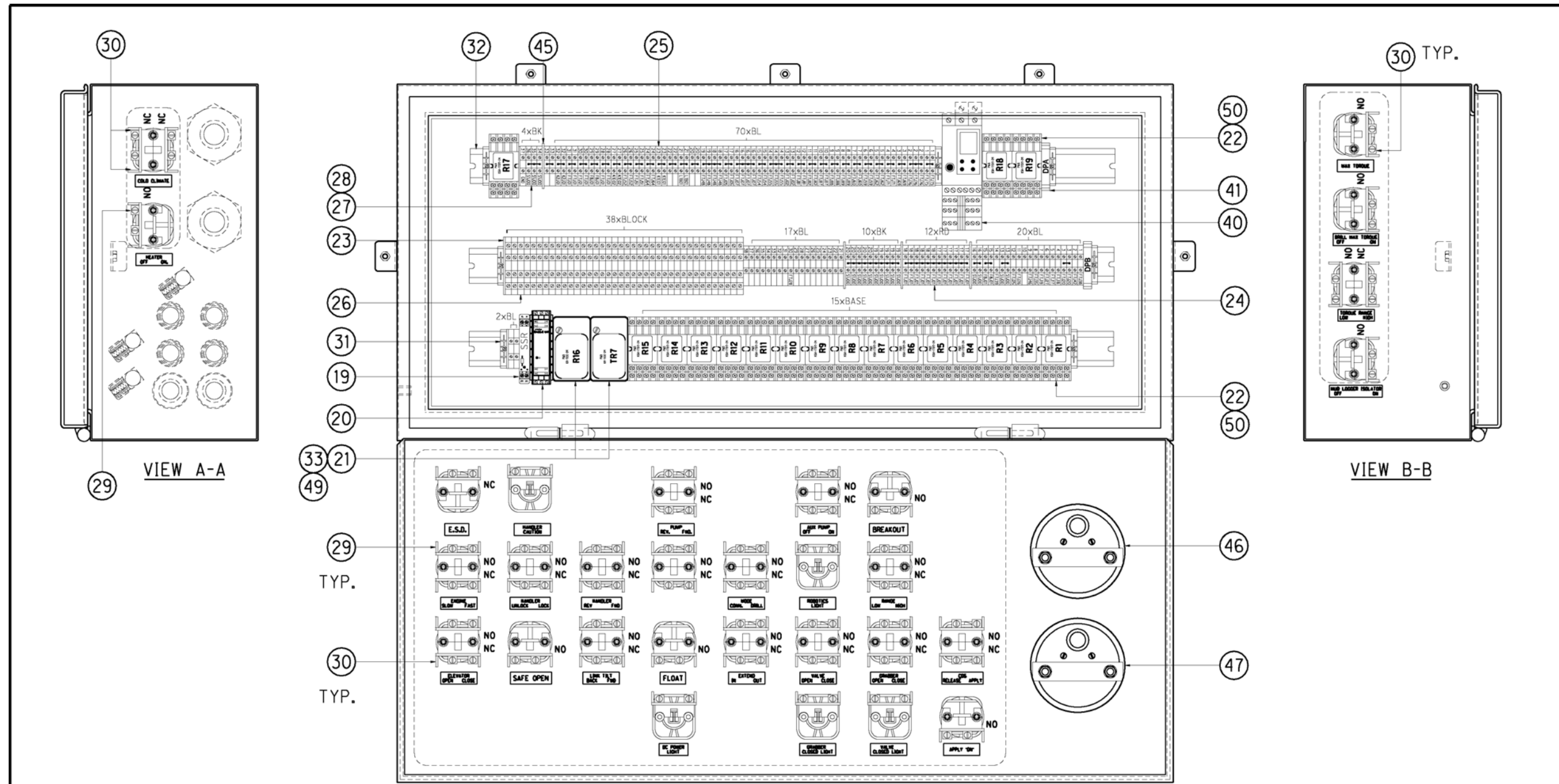


ISSUED FOR MANUFACTURE
 1 LC 01/07/16 02-003 CHANGE ELEVATOR, LINK TILK SWITCHES TO LONG HANDLE, CONNECTOR TO HAWKE
 REV BY NY/MW/DC KCD*

17
34
35
36
39
44
37
18 TYP.

ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
12	1	730110	AB	SWITCH, PADLOCK FOR 2 OR 3 POS.	24	12	3966	WIELAND	BLOCK, TERMINAL WK4/U, 600V, RED
11	4	730094	AB	SWITCH, PUSH BUTTON, BLACK, FLUSH HD	23	2	3969	WIELAND	TERMINAL END PLATE, TYPE WK4 E/U
10	2	670004	AB	SWITCH, 2 POS., MAINTAINED, SHORT HANDLE	22	18	0752	P&B	RELAY, 24VDC, ZONE 2, 2 FORM C, 3A
9	6	730086	AB	SWITCH, 3 POS., SPRING RETURN, LONG HANDLE	21	2	3796	P&B	CUBE, TIMER, 20-65V, 2 FORM C, 8 PIN
8	2	730098	AB	SWITCH, PUSH-PULL BUTTON, RED, MUSHROOM	20	1	720732	ENTRELEC	MODULE, ANALOG ISOLATOR, 24V, V/A SIGNAL ,CI.1, DIV.2
7	1	730243	AB	SWITCH, 3 POS., MAINTAINED, LONG HANDLE, W/KEY CAM	19	1	2440	WEILAND	RELAY, SS, 24VDC, 3A
6	1	730087	AB	SWITCH, 3 POS., LH SPRING RETURN, LONG HANDLE	18	3	4279		FITTING, HYD, 90° ELB, *6MJICx*6MJIC-BLKHD
5	2	730138	AB	LIGHT, PILOT, RED, INCANDESCENT, 24VAC/DC	17	5	13505	HAWKE	GLAND, CABLE, EX, STR, 1/4"
4	2	730139	AB	LIGHT, PILOT, AMBER, INCANDESCENT, 24VAC/DC	16	2	770571	HAWKE	GLAND, CABLE, EX, STR, 1/4"
3	1	730137	AB	LIGHT, PILOT, GREEN, INCANDESCENT, 24VAC/DC	15	3	730085	AB	SWITCH, 3 POS., MAINTAINED, LONG HANDLE
2	1	770689	ELECTR TEC	OVERLAY, DRILLER PANEL, 91000922	14	1	730082	AB	SWITCH, 3 POS., MAINTAINED, SHORT HANDLE
1	1	770688	ACE	ENCLOSURE, DRILLER PANEL, 91000921	13	4	730080	AB	SWITCH, 2 POS., MAINTAINED, KEY REMOVAL

DRAWN	ELN	PROJECT	GENERIC	STANDARD TOLERANCES:	
MODEL	HXI RELAY LOGIC			XX, XX 1/2	± 1/16
D. CHK.		E. CHK.		XX.X	± 0.03
TITLE	HXI DRILLER'S PANEL, DEVICES LAYOUT (30.5MM)			XX.XX	± 0.01
TESCO PART No.	770687	UNITS	INCHES	XX.XXX	± 0.005
		SHEET	10F3	ANGLE	± 0.5°
		SCALE	1:4		
		FILE NAME	91000920.bel		
		REV.	1		



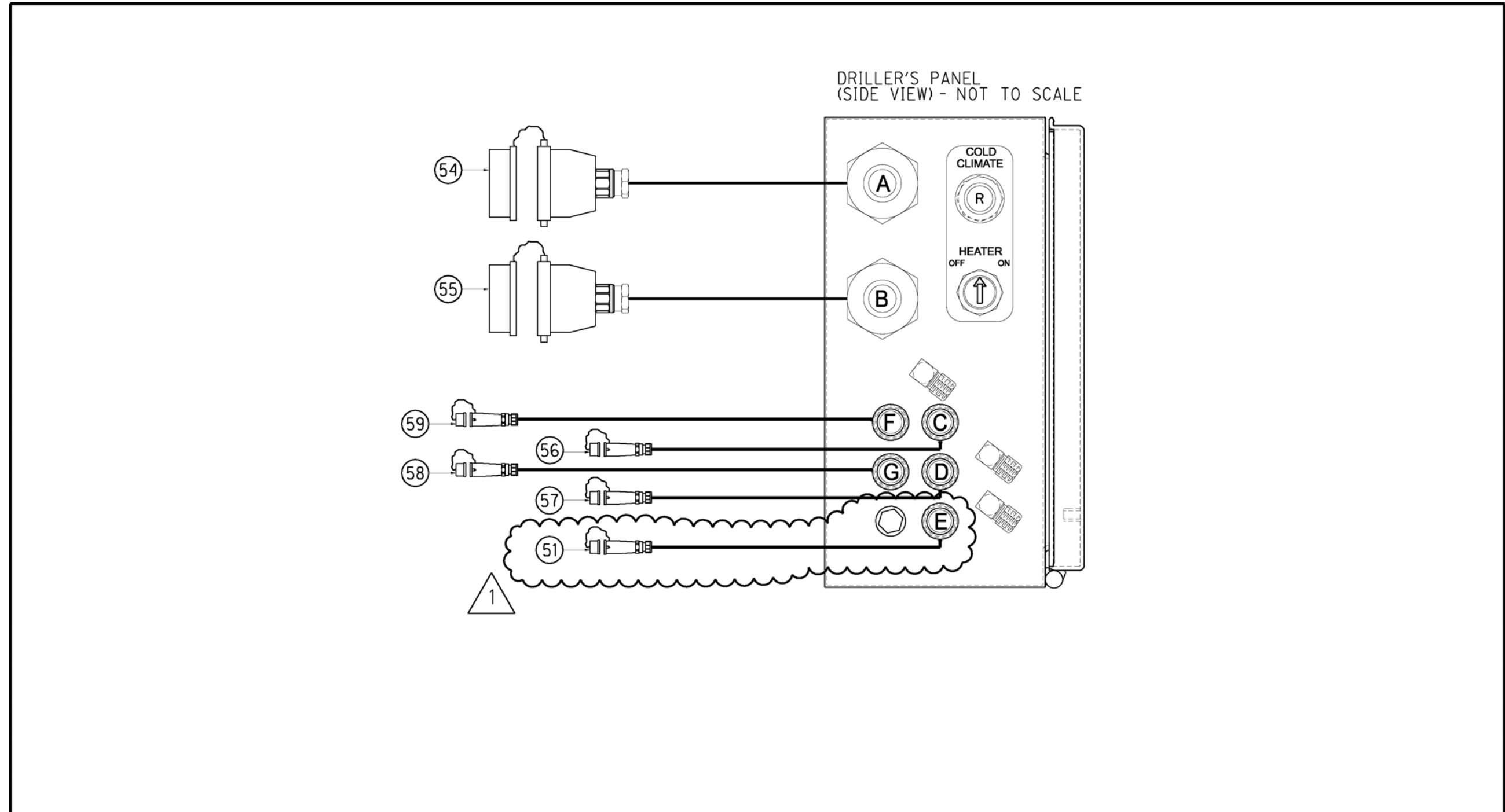
0 ELN 07/07/17 ISSUED FOR MANUFACTURE
 1 LC 07/07/16 123-003 CHANGE ELEVATOR LINK TILK SWITCHES TO LONG HANDLE, CONNECTOR TO HAWKE
 REV. BY TTM/008 100* DESCRIPTION

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ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
42	2	15058	HAWKE	RING, SEALING, ELEC, 1/4", EX	60	1	770809		CORD, DRILLERS, "F" BRAKE HANDLE
41	2	14779	WIELAND	LABEL CARRIER	58	1	770703		CORD, DRILLERS, "G", MUDLOGGER
40	1	770964	P&F	FREQUENCY CONVERTER, 1-CHANNEL	57	1	770808		CORD, DRILLERS, "D", MUDPUMP INTLOCK
39	1	16526	T&B	PLUG, SKT HD, DOME SHAPE, 1/2" NPT, SS	56	1	770807		CORD, DRILLERS, "C" DRWRKS INTERLOCK
38	1	770662	AB	SWITCH, PUSH BUTTON, AMBER, ILLUMINATED	55	1	770699		ASSY, CORD "B", 37/14, 10', 11/8STN, MALE
37	3	0664		SEAL, STAT-O, BONDED, 9/16	54	1	770698		ASSY, CORD "A", 37/14, 10', 11/8STN, FEMALE
36	6	15055	HAWKE	NUT, LOCK, ELEC, 1/2", EX	53	1	770176	PHOTOMETAL	TAG SET, PHOTOMETAL, DRILLER PANEL
35	6	15057	HAWKE	RING, SEALING, ELEC, 1/2", EX	52	1	730748		KIT, MISCELLANEOUS, DRILLER PANEL
34	5	0845	T&B	BUSHING, ELEC., 1/2", PLASTIC	51	1	770660		CORD, DRILLERS, "E"
33	2	3795	P&B	BASE, CUBE, TIMER, 8 PIN	50	18	3975	P&B	RELAY, BASE, IDEC
32	6FT	3967	WIELAND	SLOTTED DIN RAIL (TS35)	49	2	0751	P&B	RELAY, 24VDC, 8PIN, DIV.2
31	6	0823	WIELAND	END CLAMP	48	2	3962	T&B	BUSHING, ELEC, 1/4", PLASTIC
30	18	730135	AB	CONTACT, NC, CLASS 1, DIV. 2, STACKABLE	47	1	770341	DYNALCO	DIGITAL INDICATOR - RPM
29	23	730134	AB	CONTACT, NO, CLASS 1, DIV. 2, STACKABLE	46	1	770705	DYNALCO	DIGITAL INDICATOR - FT. LBS.
28	2	4051	WIELAND	TERMINAL END PLATE, TYPE WK4/U	45	4	0825	WIELAND	PLATE, PARTITION, WK4/U
27	14	0820	WIELAND	BLOCK, TERMINAL WK4/U, 600V, BLACK	44	3	0405		FITTING, HYD, CAP, #6F JIC, STEEL
26	38	2093	WIELAND	BLOCK, TERMINAL, DBL, 300V, W/3A DIODE	43	2	15056	HAWKE	NUT, LOCK, ELEC, 1/4", EX
25	109	0824	WIELAND	BLOCK, TERMINAL WK 4/U, 600V, BLUE					

MATERIALS LIST

DRAWN	ELN	PROJECT	GENERIC	STANDARD TOLERANCES:	
MODEL	HXI RELAY LOGIC			XX, XX ^{XX} / _X ----- ± 1/16	
D. CHK.		E. CHK.		XX.X ----- ± 0.03	
TITLE				XX.XX ----- ± 0.01	
HXI DRILLER'S PANEL, DEVICES LAYOUT (30.5MM)				XX.XXX ----- ± 0.005	APPD.
TESCO PART No.	770687	UNITS	INCHES	SHEET	20F3
		SCALE	1:4	FILE NAME	91000920.bel
				REV.	1



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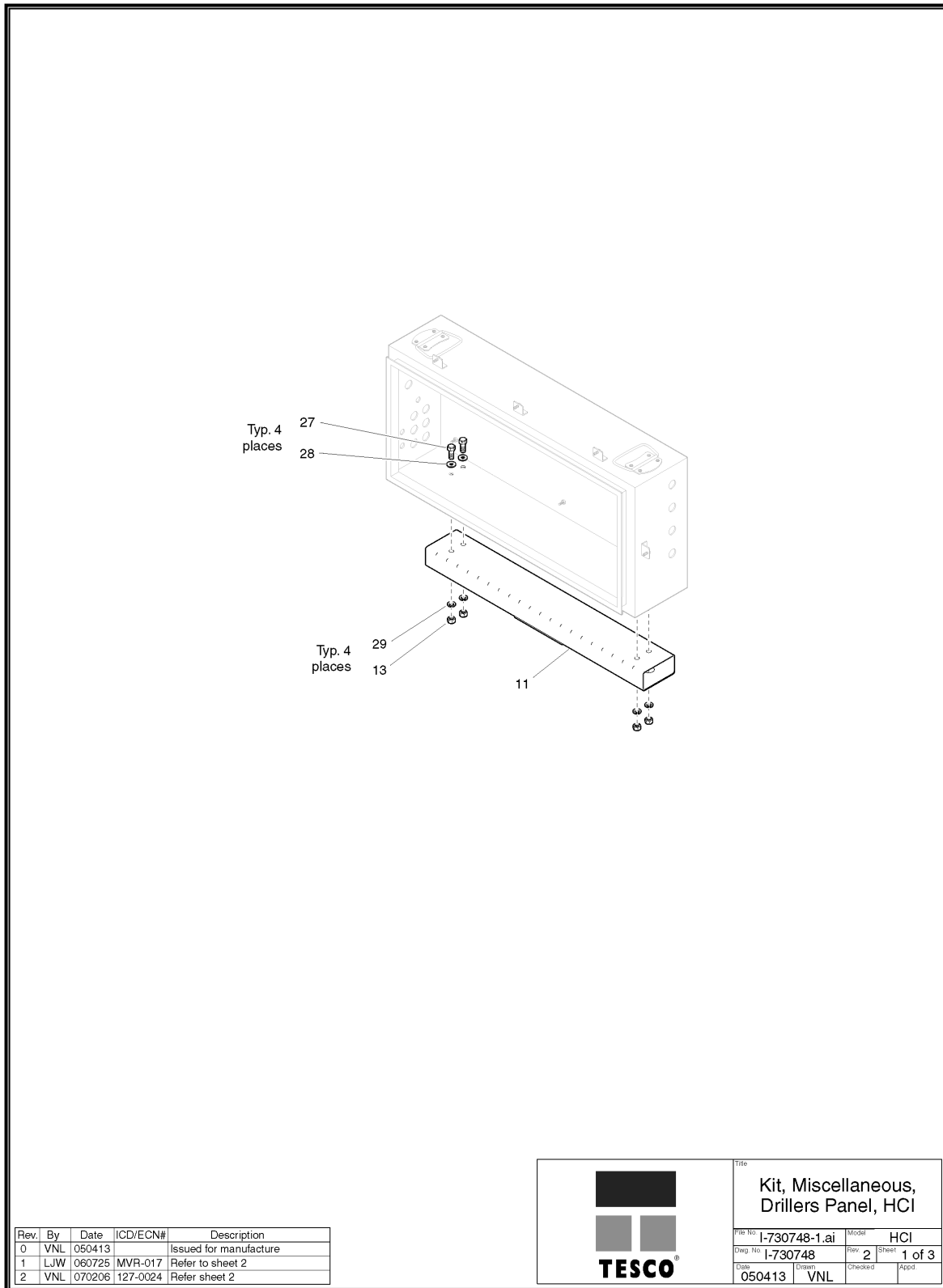
ITEM	QTY	PART NO.	MFR.	DESCRIPTION	ITEM	QTY	PART NO.	MFR.	DESCRIPTION
MATERIALS LIST									

DRAWN	ELN	PROJECT	GENERIC	STANDARD TOLERANCES:	
				XX, XX ^X / ₄ ----- ± 1/16	
				XX.X ----- ± 0.03	
				XX.XX ----- ± 0.01	
				XX.XXX ----- ± 0.005	
				ANGLE ----- ± 0.5°	
TITLE HXI DRILLER'S PANEL, DEVICES LAYOUT (30.5MM)					
TESCO PART No.	770687	UNITS	INCHES	SHEET	30F3
SCALE	1:4	FILE NAME	91000920.bel		
REV.	1				

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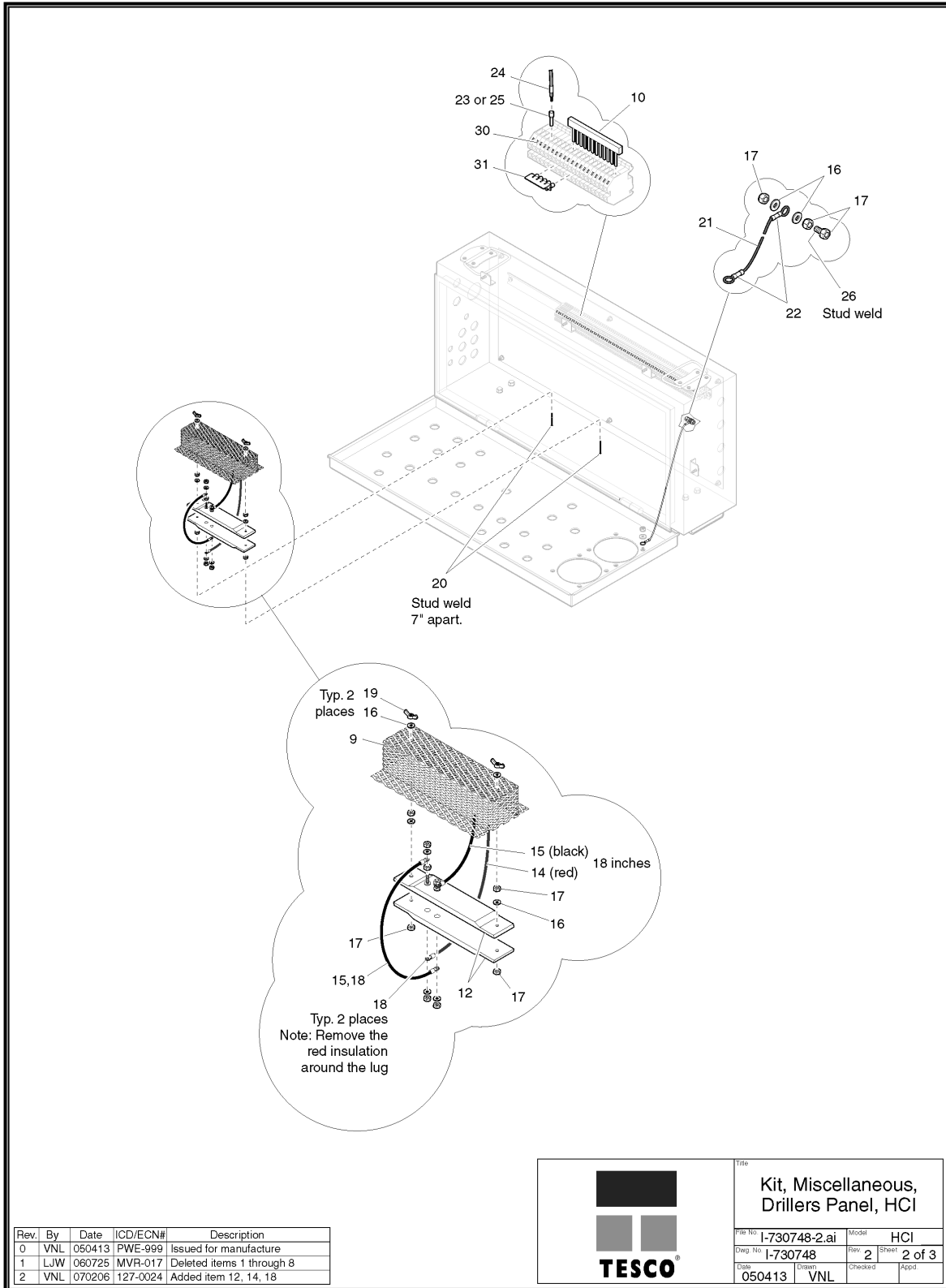
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KIT, MISCELLANEOUS, DRILLER'S PANEL, HCI




Rev.	By	Date	ICD/ECN#	Description
0	VNL	050413		Issued for manufacture
1	LJW	060725	MVR-017	Refer to sheet 2
2	VNL	070206	127-0024	Refer sheet 2

		Title	
		Kit, Miscellaneous, Drillers Panel, HCI	
File No	I-730748-1.ai	Model	HCI
Dwg No	I-730748	Rev	2
		Sheet	1 of 3
Date	050413	Drawn	VNL
		Checked	
		Appd	



Rev.	By	Date	ICD/ECN#	Description
0	VNL	050413	PWE-999	Issued for manufacture
1	LJW	060725	MVR-017	Deleted items 1 through 8
2	VNL	070206	127-0024	Added item 12, 14, 18

		Title	
		Kit, Miscellaneous, Driller's Panel, HCI	
File No.	1-730748-2.ai	Model	HCI
Dwg No.	1-730748	Rev.	2
Date	050413	Drawn	VNL
		Checked	
		Appd.	
		Sheet	2 of 3

Parts List

Part # 730748

Drawing # I-730748

Rev. 2

Page 3 of 3



File # I-730748.xls

Refer: 2 Illustrations

Drawing Title: Kit, Miscellaneous, Drillers Panel, HCI

Item #	Tesco #	Qty	Description
1			Not Used
2			Not Used
3			Not Used
4			Not Used
5			Not Used
6			Not Used
7			Not Used
8			Not Used
9	16260	1	GUARD, HEATER, EXPANDED METAL, DRILLER PANEL
10	3802	3	JUMPER, WIELAND, 12 PT COMBINED
11	4364	1	MOUNT WELDMENT, DRILLERS CONTROL PANEL
12	9375	2	HEATER, STRIP, 50W, 24V, F/DRL.PNL
13	0961	A/R	NUT, HEX, PLTD, NC, GR8, 3/8"
14	16298	A/R	WIRE, RED, 14AWG/41 STRAND, 125DEG C, GTF
15	16299	A/R	WIRE, BLACK, 14AWG/41 STRAND, 125 DEG C, GTF
16	11467	A/R	WASHER, FLAT, 1/4, TYPE A, NARROW (SAE), HARDENED, PLD
17	0960	A/R	NUT, HEX, 1/4-20UNC, GR8, PLD
18	16295	A/R	LUG, RING, BLUE, #14, FOR #8 STUD
19	16294	A/R	NUT, WING, 14-20UNC, PLTD
20	16293	A/R	STUD, WELD, 1/4-20UNC X 2 LG, SS
21	16296	A/R	LANYARD, CLEAR, INSULATED, 1/16, STEEL WIRE
22	14872	A/R	CRIMPS, F/3/32 LANYARD CABLE, INSULATED
23	16152	A/R	FERRULE, WIRE, 18AWG, WHITE (500/BOX)
24	14868	A/R	MARKERS, WIRE, 4-SPLIT, BRADY
25	14565	A/R	FERRULE, WIRE, 16AWG, RED (100/BOX)
26	16297	A/R	STUD, WELD, 1/4-20UNC X 3/4 LG, SS
27	15792	A/R	CAP, GR8, HEX, NF, PLT, 3/8 X 1-1/2
28	10632	A/R	WASHER, FLAT, 3/8, TYPE A, NARROW (SAE), HARDENED, PLD
29	7135	A/R	WASHER, LOCK, HELICAL SPRING, 3/8, ALLOY, PLD
30	6550	A/R	Marker, 6mm, Blank, 10/Strip, Enlarged, F/Terminal
31	0816	A/R	Jumper, Screw, 70P, F/Terminal, WK 4/U, Plated

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